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What Is Wrong With Honey?

By Harold A. Albaugh,
Michigan.

WITH the shortest crop in years produced in the year 1934, with no carry-over during the previous years, the great drought still unbroken, the bread basket of the nation turning into a new Sahara, one is inclined to seriously ponder and ask the question, What is Wrong with Honey?

Prices today, with only a few meager cans in the hands of producers, are lower than they were at this time last year, and the demand is slow. Face to face with these conditions, one is justified in a frank and careful analysis of the honey situation. In my humble opinion there is nothing wrong with honey. We, the honey producers, are entirely to blame for this situation, and unless we do some serious and constructive team work in the near future, we will have to reconcile ourselves to the inevitable and resort to the old law of the survival of the fittest.

It is almost beyond our comprehension to realize the changes that have taken place in the buying and eating habits of the American public during the last twenty years. As late as 1925 it was the unusual thing for the beekeeper to package any portion of his honey in glass, and only a few years before that, the great rank and file of the people knew of honey only as comb honey. Today, 85 per cent or more of table honey goes to the consumer in glass, and must compete with every description of preserves, jams and jellies which only a few years back were practically unknown on the grocers' shelves, and I am frank to say that if we were dependent today upon the same source of consumption for our honey as we were ten or fifteen years ago, we would hardly be able to give our product away at the present time. About the only serious competitor honey had a few years ago was cheap syrups, and they, along with honey, have almost disappeared from the retail channels in comparison to their former prominence and volume.

The only possible thing that has saved the situation for the honey producers during the past few years, has been the efforts of the American Honey Institute in educating the public to the values and new uses of honey. Today, instead of honey being something purely to spread on bread, it has hundreds of commercial uses, and it is this tremendous commercial outlet that has saved us from almost collapse. But this valuable medium is soon to be lost to us unless something heroic is done to finance the American Honey Institute in a way that it can adequately function and continue to carry this gospel to the public.

It is not necessary to dwell upon the merits of the American Honey Institute or what it has done for us in the past. Under the splendid leadership of Mrs. Jensen and her able assistants, we are getting the results of a million dollar organization, and it is surely no credit to our industry in limiting them to a mere pittance in this splendid work.

After much thought on this subject, I wish to suggest a plan for the partial financing of the Institute, and in presenting this plan, I wish to say that it is more or less in the rough and could be changed in any way necessary, and in no wise would I wish to leave the impression that the honey producers responsibility would end by making this small investment, but if we could reach even a fair percentage of the some 800,000 honey producers in the United States, and they, each and every one of them, are certainly reaping the benefits from it, the Institute's problems would be very greatly relieved financially. As I see the picture, the problem of us beekeepers is that, fundamentally, we are individualists, which is a splendid thing, but in this particular instance we are at the crossroads, and as stated before, we must either go on or go back, and vigorous cooperation seems our only solution.

My plan is as follows: Instead of the Institute publishing an Honor Roll and Annual Report each year, the Institute publish a Year Book, which should not be any more expensive than the former as it is now published. This Year Book should include the Annual Report of the Institute in a condensed form, if necessary, and in addition to this report, a complete list of all honey buyers. This list could be made up from all of the material the Honey Institute has at hand at the present time, together with the cooperation of the President and Secretary of the beekeeping associations in all of the different states, as well as from all other sources that are available. It would also list all of the contributors to the Institute of one dollar or more during the year, as well as a list of all supply dealers, etc., who subscribe to the Institute. This would bring the producer and consumer directly together, and I have been assured by a number of large bottlers and users of honey, that they would not only welcome this procedure and information, but would try to buy entirely from contributors to the Institute. The honey producer would have at his ready disposal a formidable list of honey users to offer his product to, which in many cases would stabilize the local market and eliminate

a great deal of dumping, which has such disastrous results.

Advertising space should be reserved in this Year Book for all legitimate purposes, of which glass manufacturers, supply manufacturers, queen breeders, package bee shippers, etc., would welcome the opportunity for display space, and which would go a long way toward the expense of publication, as well as show the honey producer at a glance who are contributing to this worthy cause and are entitled to their business.

It must be remembered that the American Honey Institute is in no wise connected with the sale of honey, and must not be bothered or hindered in any way from that angle, but the Institute does have this information which can be passed on to the producer with mutual benefit to all, and out of the some 800,000 honey producers, I cannot conceive of any who are really interested in honey production who can afford to be without this valuable Year Book, and it has the advantage of giving each and every producer something tangible in immediate return for his dollar invested, which he can immediately use, to say nothing of the future benefits which it will carry through the splendid work of the Institute.

In addition to this Year Book, I suggest that the Institute have printed a quantity of attractive small stickers in the form of a seal with the following printing: "Contributing Member, American Honey Institute," and of course would carry the year date. I personally would like to see this a fancy gold sticker printed in blue. Every contributor would have the right to buy these stickers at a nominal price and display them on all of his product, as well as correspondence, so that at all times he could show exactly where he and his product stand, and would, in a measure, replace the Institute cut which is now furnished to be used on members' printing. It would seem this sticker would answer the purpose better, as it would be more prominent, and has a more diversified use.

It is up to each of us, right now, to do our part. A few cannot continue to pay the freight for all. It's a job for all of us together, large and small, and if we all pull together, we stand on a new and golden area in honey production.

May I repeat, there is nothing wrong with honey, but we producers certainly have plenty of room for improvement.

New Bulletin on Fire Blight

Bulletin 586 entitled "Fire Blight of Pears and Related Plants" has recently been issued from the press of the College of Agriculture, Berkeley, California. H. Earl Thomas and P. A. Ark are the authors.

The subject is treated rather fully including symptoms of blight, plants susceptible to blight, sources of the bacteria, dissemination of the organism and control.

The bulletin also contains a list of seventy-three papers which have been written on the subject of fire blight, giving names of authors and place of publication. This is a valuable feature for anyone who wishes to investigate the subject further.

Of special interest to beekeepers is the discussion of the part played by insects in the spread of blight organisms. While it was found that honeybees do play a part in the spread of blight from blossom to blossom no evidence was found to indicate that the bees carry the infection to their hives and thence again to the trees. When a hive of bees, presumably contaminated, was removed and immediately enclosed in a tent with another tree no blight resulted in any instance.

The indications are that the bee is only an incidental agent in spreading blight from flower to flower but that other means are responsible for initial inoculation.

The Transportation of Bees Without Feeder Tins or Feed

By Dr. L. D. Wilmot,
Manitoba.

IN the spring of 1933 one truck left Manitoba for the southern states for package bees. They returned with 500 packages. Although there were some losses, the trip was considered successful. In 1934, 3,000 packages were brought in by truck — some losses occurred due to syrup shaking out of the feed tins on to the bees and drowning them. The syrup shook through the floor of the truck and then on to the ground — the wastage of syrup made the packages sticky and nasty to handle — the 2-pound syrup tin added greatly to the weight of the load, which limits the number of packages to be placed on the truck, as a load limit of three tons is on some of the highways.

This year six trucks to my knowledge have gone south for bees. As I was purchasing 600 packages this spring I decided to send the truck and bring them to Winnipeg 1600 miles without feed tins, thus eliminating 1200 pounds of load.

McDougal, who has charge of my apiaries, is a very capable young beekeeper. Last autumn he undertook some experiments (which he extended over a period longer than that required for the trip) in feeding package bees with a brush. He assumed the responsibility of delivering the six hundred packages in Winnipeg. He left April 7th, accompanied by one man and arrived at the Stover Apiaries on the 11th, where arrangements had been made to load and leave on the 13th. I must give Mr. D. D. Stover a great deal of credit for successful start on the trip homeward.

Owing to his promptness and the efficiency of his organization, 600 packages of bees were fed by brush, handled and loaded in one day. It was done with the best of care and thoroughness. McDougal left Tibbee Station at 4:00 p. m. on the 13th. He had considerable trouble with the truck the first part of his trip and ran into a bad windstorm near New London where he had to take shelter in a garage for twenty-four hours. While there he unloaded the bees and fed them by brush with 300 pounds of sugar and 300 pounds of water. The bees were well clustered and all in good condition.

He drove day and night when the weather permitted and made the last 800 miles in thirty hours. The weather was very cold all the way — he arrived in Winnipeg 1 a. m. on the morning of the 19th in freezing weather. Some of the bees in the outer packages had dropped to the bottom on account of the cold. They were immediately unloaded into a warm place and then fed. All the bees revived in a short time. A great deal of credit is coming to McDougal, to deliver 600 packages of bees all alive and in good condition after a 1600 mile trip under considerable adverse conditions en route.

This is the first time, to my knowledge, bees have been taken on a long trip without the feed can and syrup in the package. After our experiment in feeding packages last fall, I decided bees would ship by express without feed tins or syrup; so, on the 13th of April Mr. Stover shipped to me four packages by express to Winnipeg, without feeder tins and syrup. These packages were fed by brush before leaving — they all arrived in Winnipeg in perfect condition, thus saving the cost on feed tins, syrup and nine pounds less express. The cost of the trip by truck was about 15c per package.

How to Use Carbolic Acid in the Removal of Honey

This has been promised readers for some time but a lack of good pictures has caused us to hold off having it written until they were available. It will appear in the July number. It takes those interested step by step through the method of honey removal by means of this chemical. It is not a new scheme but has been tried for years. Mr. Pellett found references to it years ago in going through old copies of the British Bee Journal but for some reason or other, it was dropped for a long time and nothing was heard of it until within the last few years.

Chas. Mraz, apiary inspector of Vermont, called attention to it in Gleanings. We have worked out a system of our own for using the acid which we think is as good or perhaps a little better than any we have read about elsewhere (excuse our modesty).

Supply and Demand at Work in Market

The law of supply and demand is at work in the honey market. An outstanding market man recently predicted a honey famine this spring. Last season's drought caused the loss of many colonies of bees with the result that honey producers became discouraged. The same drought pushed prices up about twenty per cent. Prices of honey and beeswax are now about twenty per cent higher than they were a year ago.

Prospects for this year look better than they did at this time last year. We have received more moisture during winter with prospects for improved profits from paying colonies in 1935.

Beekeeping is still the best agricultural pursuit even though honey at present prices has a lower buying power as compared with the prices of other foods.

In order to have paying colonies of bees, it is necessary to look into the future now and get all of the necessary equipment ready for the busy season to come. Weak colonies should be strengthened and every colony should be well supplied with food to carry them through the building up period before the heavier honeyflow begins.

J. H. Sturdevant,
Nebraska.

Saskatchewan Honey

Three out of the five entries of honey from Saskatchewan secured prizes at the Imperial Fruit Show in Leicester, England, the first time Saskatchewan honey has been exhibited there. It carried first and second prizes for bottles of liquid honey, second prizes for a market case of honey in tin.

The high quality of Saskatchewan honey established an enviable reputation in the British Isles last year when a carload of honey was forwarded to London markets. The shipment was a surprise to the importers and their wholesale customers who were so favorably impressed with its clearness and quality, that their orders were placed for a larger quantity in 1934. However, because of the short crop this year, it was only possible to forward one carload.

Pictures in Contrast

THE PICTURE at the top is of 32 stands of bees that were for sale out in the country. Upon arriving, I found the hives in a weed patch higher than my head. Half of the 32 hives were alive but moths had taken the other half. Many hives had been upset for some time. The hives had given away under the weight of honey. The bees were in bad condition and I felt it would not pay me to take them. I offered the owner $16.00 for the stands. He did not like the offer saying they would burn them unless they could get $5.00 per stand.

The owner complained that the bees did not pay. How could they be expected to pay when the bees did not have a chance? One or two supers were put on the hive in the spring and not disturbed until the bees were too cold when the honey was taken off.

Now consider the picture below which shows bees that pay a big profit and receive proper care. I extracted honey from these four stands and found the supers filled to capacity. I take my camera with me when I visit beekeepers and take pictures of conditions. The two pictures will show how some beekeepers expect too much from their bees.

W. E. Stepp,
Kansas.

NEWS NOTES
American Honey Institute

National Honey Week

Dates have been definitely set for November 10 to 16 for National Honey Week this year.

Honey Way Luncheon

The Institute had the pleasure of entertaining four nationally known home economists at a luncheon February 5th with honey included in every service. The menu with recipes is available upon request. Those attending the luncheon were Mrs. Nell B. Nichols, Homemaking Department, Woman's Home Companion; Mrs. Clara Gebhard Snyder, Director, Home Economics, Poultry Institute; Miss Bee Rowe, Extension Specialist, Farmer's Wife; Mrs. Luella Mortensen, in charge of Home Economics Extension, University of Wisconsin.

February Radio Programs

The following radio recipes for honey were given over the National Net Work during the month of February:

Swift & Company, recipe—Ham with cranberries and honey, calling for a half cup of honey.

Pillsbury Flour Mills, recipe in Cooking Close-Ups—"Walnut Scrapple with Honey."

Fleischman Yeast Company announcing Bakers' Special for week of February 3—Honey Topped Coffee Cake.

Ford Motor Company announcing beeswax used in the manufacture of parts for Ford cars.

Women's Auxiliary

Miss Florence Bennett, of Birkenfeld, Oregon, is now chairman of the educational department of the Oregon State Beekeepers' Association. She asks the department to help her with her campaign. That gives the Institute four Women's Auxiliaries in the United States—California, Illinois, Iowa and Oregon.

The Institute has a plan available to any state organization that wishes to take advantage of the results such an auxiliary can obtain.

Honey Copy in January Magazines

This does not mean that honey copy may not be in other magazines. We know about the following:

Woman's Home Companion, Honey Butter for Pancakes "Food Calendar" page 53; Parents Magazine, Honey in Sandwich Filling (¼ cup), page 42; American Cookery Magazine, Recipe for Honey Nut Brownies (1 cup), page 361; The California Citrograph, Recipe for Honeyed Fruit Peel, page 87; Cold Cooking Magazine, Recipe for Frozen Pudding (¼ cup), page 3; The Flame, official organ of the Phoenix Metal Cap Company, an article on the advertising campaign of John G. Paton Co., also an article on the new method for processing honey, pictures included, page 21; Syndicated Service of Betty Barclay, Recipe for Bran Fig Honey Bread (½ cup), page 1; Bakers' Helper, Fleischman's ad, mentions the week's feature, "Honey Topped Coffee Cake."

Honey Copy in March Magazines

"American Home" — Grapefruit salad with honey dressing; "Barbara Brooks" syndicated release, Kellogg's. Goes to newspapers and magazines. Gives recipe for Honey Tea Muffins, using one cup of honey. "Canner"—March 16th announces National Honey Week. "Citrograph"—Official publication of Citrus Growers. One of its articles includes, "An ancient Chinese manuscript telling how to **preserve** citrus fruits in honey. "Colliers" (March 9th), describes Venetian Treacle. "A compound consisting of about 45 vegetable ingredients, opium, viper's flesh and honey used throughout Europe, Asia and Africa for almost every conceivable illness."

"Farmer's Wife"—Suggests honey with Hot Bran Muffins. "Food Field Reporter"—Describes the Dyce patent on crystallization of honey. "Forecast"—Grapefruit sweetened with honey in Breakfast Menu, Lebkuchen Recipe using a third cup of honey. "Hostess"—Trade magazine of Sprague, Warner & Company. Recipe and picture, Milady's Fruit Salad, 3 tablespoons honey used. "Household Magazine" — Kellogg's Rice Krispie ad suggests "The cereal is extra delicious when served with honey." "Ladies Home Journal"—Entertain in Turkish Style by Caroline B. King contains six interesting recipes, one of which calls for Sweet Pilau. Honey is used. "Liberty"—To the Ladies by Princess Kropotkin gives her original recipe for Pears Baked in Honey and Spice. "McCall's"—Full page ad of Swift & Company. Colored picture of ham baked with honey and cranberries. Uses two cups honey. "Parents"—Recipe for Pumpkin and Honey Custard. A spoonful of honey used for each service on whipped cream topping.

"Screen Play"—Maraschino Honey Jelly. Recipe calls for 2½ cups honey. "Sunkist" — Educational food bulletins for school. Five honey suggestions given in the six series. "Woman's Home Companion"—Swift & Co. ad as in McCalls. Food Calendar, salad dressing recipe using one-fourth cup of honey.

All this publicity in magazines with millions of circulation going to housewives all over the United States cannot help but have a decided effect in the demand for honey. This kind of service the Institute is trying to foster and believes it deserves the support of everyone of the 800,000 beekeepers in this country.

An estimate of the total circulation of each magazine for March is five million. The total amount of honey needed to make the recipes once is eight pounds. Advertising specialists estimate that the food section of magazines like these is usually read by ten per cent of the subscribers. About 500,000 persons, therefore, should become interested in making up honey dishes as a result of the March releases. If the average of the recipes made up used one-half cup of honey, approximately 180,750 pounds of honey would be consumed.

In the March newspapers, there was also considerable honey copy. Chicago Tribune had a wonderful article by Mary Meade "Honey Is Sweet Tooth Way of Keeping Health." March 2nd issue. Daily circulation more than a million. Five Wisconsin, two Illinois, two Iowa, one Indiana, daily newspapers carried ads of Honey Krushed Wheat Bread or merits of it. A Madison bakery is using 1500 pounds of honey a week making this bread.

The Pillsbury Flour Mills also were in the front again in a broadcast over the Columbia network in "Cooking Close-Ups." Honey was mentioned 55 times, four honey recipes given. Beekeepers surely ought to appreciate the work done by these people.

National Honey Cookery Contest

Nine companies have offered a hundred dollars in cash prizes, seven publishing houses have listed twelve magazine subscriptions, three food companies a series of food prizes, and two equipment companies three gift equipment sets.

Rules and lists of prizes are to be sent to the press by May twentieth. If you wish to be listed or you know of some company that does, please write for contest offer form at once. This contest was planned for beekeepers in every state and the Institute would appreciate having state association officers check the plan and indicate what their members will do locally.

A Hundred Honey Helpings

This is the title of a book being planned to replace "Half a Hundred Honey Helpings" of which not a single copy is left. This book will contain winning recipes in cooking contests. Specialists have already placed orders for sample copies. If you wish to reserve an order, please write American Honey Institute in order to help swell the total printing.

The book will consist of thirty-two pages and will contain a general dis-

cussion of the use of honey with chemical compositions and seal of acceptance of American Medical Association. One hundred of the most popular recipes as indicated by fan mail and reports at cooking schools to include beverages, breads, cakes, cookies, candies, fruits, meats, pies, puddings, salads and dressings, sandwiches and specialties. Also prize winning recipes of the 1934 Honey Cookery Contest, twenty-six of them.

This edition also contains fine pictures of honey dishes. It will be in two colors, green and yellow of good stock.

Honey in April Magazines

Honey was also mentioned in about fourteen trade, general and institutional magazines and included one radio program by Joe Penner on the Fleischman Yeast Hour on April 28, featuring Honey Topped Coffee Cake.

"Winnipeg & Western Grocer" Initiates Honey Department

The "Winnipeg & Western Grocer" leading grocery and food paper published at Winnipeg by the Jackson Trade Publishing Company has initiated a Honey Department with Provincial Apiarist L. T. Floyd [with whom many of our readers are familiar] as staff member and editor of the honey section. The issue at hand gives a report of the Manitoba Association, a report of 1934 Manitoba honey production and a splendid article by Ed. Braun, of Brandon, on requeening for winter. Also shorter articles, "Preparing Honey for Market," by R. D. Nicholson; "Comb Honey," by J. W. Braithwaite; "Packing in Glass," by Roy Mullin.

Officers of the Manitoba Beekeepers' Association for 1935 were elected as follows according to this report: president, T. Pineault, Otterburne; first vice-president, J. C. Rippingale, Oakbank; second vice-president, R. D. Nicholson, Oakville; secretary-treasurer, L. T. Floyd, Winnipeg.

In a paper entitled "Empire Honey Resources" by Harry W. Jones, of Bedford, he reported that the English market at the end of 1933 rated Canada first as a shipper of honey. Out of a total of ten to twelve million pounds consumed the British Isles produced about one-half of this, most of which was sold in one-pound containers. Mr. Jones reports that Canada uses two pounds of honey per capita, England eight ounces and that each resident of the province of Manitoba uses four pounds a year. According to L. T. Floyd, the Manitoba honey production in 1934 was more than four and a half million pounds of honey with 3,133 honey producers registered and a provincial per colony average of 112 pounds per colony.

In addition to this publication, the "Prairie Grocer and Provisioner" also published at Winnipeg, has an extended report of the meeting of the Manitoba Association in the January issue.

To Get Fully Developed Queens

Mr. Bessonet's article in March American Bee Journal is of interest. However, it would seem that his provision for feeding the grafted cells in the finishing colony is inadequate. It is evident that a large number of queen larvae in a colony with laying queen and a full complement of worker larvae will not be properly developed, no matter how much food is given. In order to get fully developed queens, the finishing colony must be strong, well-fed, queenless and devoid of worker larvae. Perhaps this lack of finishing off is why so many queens from large breeders are proving unsatisfactory. We rear hundreds of queens for our own use, and have purchased more than 100 from the South. None of those bought have equalled our home-bred queens so far as longevity, colony strength and honey-gathering qualities of their progeny is concerned.

E. S. Miller,
Indiana.

Power Company Boosts Honey

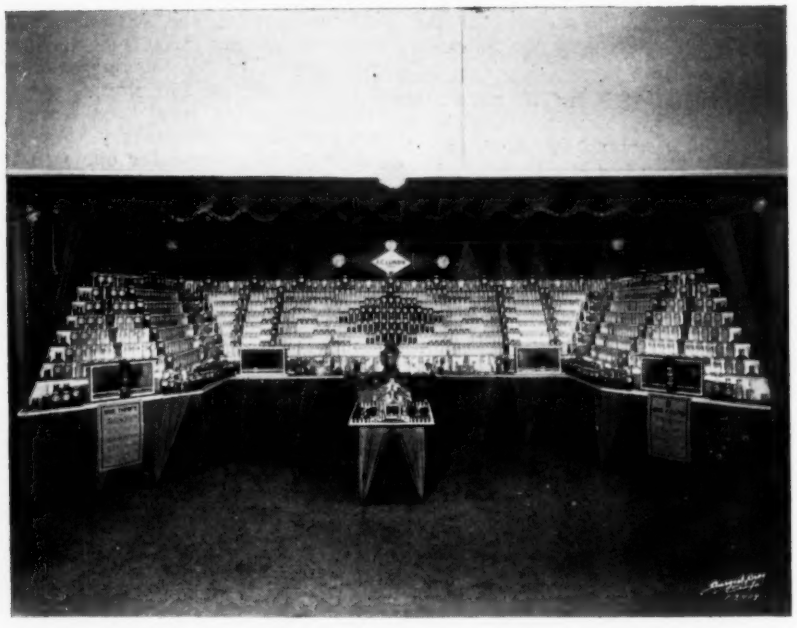
SINCE 1926, the Farm Electrification Department of the Puget Sound Power and Light Company has broadcast over station KOMO, one of the major radio stations in the Pacific Northwest, 104 fifteen minute educational programs. These programs have been for a twofold purpose: to instruct the farmer, and to inform the general public regarding the problems with which farmers have to cope.

Recently Mr. J. C. Scott, Agricultural Engineer in charge of educational publicity, has become especially interested in problems of beekeepers. In consequence, three programs have been devoted to bees and honey. The first, an interview with Mr. Arthur Crews, a young man who has made a conspicuous success with bees, was put on the air on September 6, 1933. The second, an interview with Mr. John Sentz, prominent beekeeper of Snoqualmie Falls, Washington, was broadcast October 9, 1933. The third, a paper prepared by Natt N. Dodge, was read in connection with National Honey Week, on November 19, 1934.

Mr. Scott states that his company believes that the foundation of national prosperity lies in agriculture. By helping the farmer, the Puget Sound Power and Light Company is helping the entire region upon which they depend for the consumption of electrical energy. Mr. Scott states that he intends to do everything possible to boost honey and further the interest of beekeepers.

N. N. Dodge,
Washington.

Honey Exhibit, World's Fair Style



A. C. Lundin's exhibit at Tampa Fair. Note lighting. Chicago had nothing on this for style, color and light.

THE BEE and honey exhibit at the Florida State Fair, held in Tampa, January 29 to February 9, 1935, surpassed in many ways the 1934 honey show. There was more honey on exhibit, and all the exhibits were higher class. In fact, they were all of such high class that the judges found it difficult to place the premiums. Following is a list of the awards:

A. C. Lundin, Tampa, 1st.
House & Haynes, Dunedin, 2nd.
Tim Tietsema, Oviedo, 3rd.
Florida Honey Distributors,
Winter Haven, 4th.
Alvin Bryan, Tampa, 5th.
Ross Haynes, Dunedin, 6th.

The judges were Lynn Dewey, Orsino, Florida; Neal Dubois, Jupiter, Florida; J. H. Baldredge, New York.

House and Haynes had the American flag made with bottles of honey. This was beautiful and attracted a great deal of attention. A. C. Lundin exhibited a glass house full of bees, comb and honey, and the bees working through a tube. This also was very attractive. Mrs. Tietsema cut comb honey and dipped it in chocolate and sold the candy. Many people were interested in this process of making candy.

The Florida State Beekeepers' Association exhibit came in for its share of comment and attention. The honey for this exhibit was donated by the members with the understanding that it would be sold and the money sent to the American Honey Institute. Mr. W. R. House, of the firm of House and Haynes, Dunedin, Florida, bought the exhibit and after all expenses were paid, M. E. Darby, Secretary of the Association, sent one hundred dollars ($100.00), to the Institute.

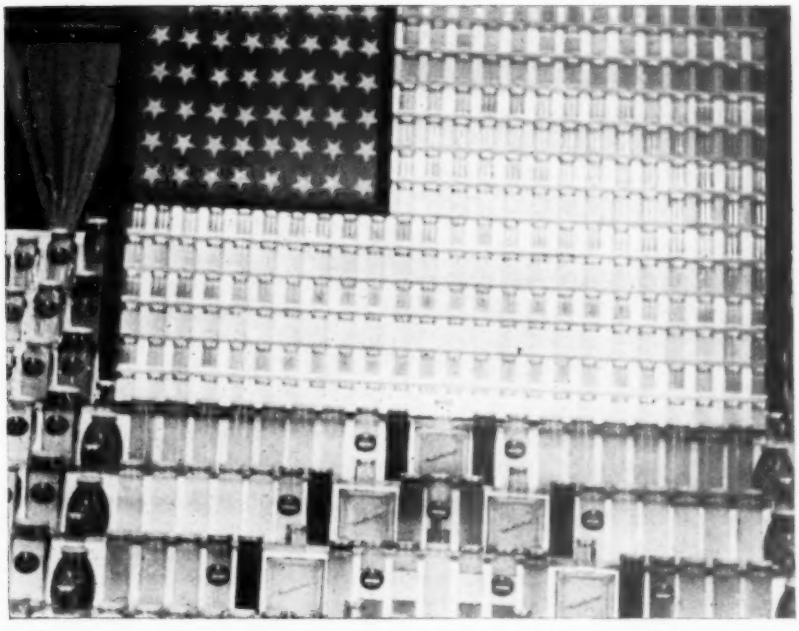
M. E. Darby created a honey girl out of bottles of honey. She was a real "honey," and was called "The Queen of the Honey Show." The booth in which she was displayed was formed with beeswax, the foundation for this was furnished by Dadant and Sons, Hamilton, Illinois. They were kind enough to send this in six-foot lengths so it worked in very nicely.

The first Thursday of the fair, January 31, the State Beekeepers' Association, held a meeting at the Chamber of Commerce, Tampa. This meeting was well attended. E. R. Root, Medina, Ohio, gave a good talk. He expressed himself very strongly against the burning of the woods. A number of other visiting beekeepers from the northern states gave some of their beekeeping experiences. J. H. Montgomery, Assistant Plant Commissioner, of the State Plant Board, made a very good talk. He assured the beekeepers that the Plant Board would cooperate with them to the fullest extent in the control of bee disease. R. E. Foster, Apiary Inspector, gave a talk on bee disease which was followed by a discussion of the bee disease situation in Florida, and a resolution was passed by the Association that they would ask the 1935 Legislature to increase the appropriation for apiary inspection.

The meeting adjourned at 5 p. m., and the beekeepers attended the fair in the evening.

The first Tuesday after the fair closed, February 12, a beekeepers' meeting and fish fry was held at Largo, Pinellas County. The Pinellas County Beekeepers' Association acted as host to all beekeepers. There were over fifty present and a very good time was enjoyed by all.

Another by Tim Tietsema.



House & Haynes' exhibit. A sweet flag.

Black Bees Again and Comb Honey Finish

By Carl E. Killion,
Illinois.

In the distant past someone remarked that black bees capped their honey whiter than Italians. This comment got into print. Time and again it has appeared in our journals and text books and convention speeches. Why such a fable, if one could call it by that name, could live this long, is beyond my imagination.

During my first year of beekeeping that remark was made to me. So after hearing it repeated again and again, I soon accepted it as a fact. Even have I gone so far as to repeat it myself, much to my chagrin later. I was just as sincere as our good friend, Mr. Haxton, was in the November issue.

Perhaps it is true that **some** blacks do make a whiter capping than **some** Italians, but that does not hold true in as great a percentage of cases as we are told.

During the past eight years the writer has given no small amount of study on that subject. Minute observations and records during this time have proved, beyond the least conception of a doubt, **that some well bred Italians are so far superior to black bees that there is absolutely no comparison.** Sad, but true, there are some Italian bees that do not know the first letter of comb honey finish. I lamented this fact at the Indiana State Beekeepers' Convention at Indianapolis, in 1933, in the presence of the late Mr. Demuth. I remember his nod of approval of that remark.

In speaking of comb honey production to beekeepers and especially to any beekeeper producing comb honey, I always stress the fact about "comb honey bees." I do not believe the average beekeeper fully realizes the importance of that remark. When the finish on honey means much on the bread and butter end of it, it will cause him to make a specialty of this thing called **finish.**

In all my experience with bees this remark holds true: There is not one desirable trait I can credit to black bees. One can never trust them for anything unless to thwart the plans of the beekeeper. They remind me so much of the renegades of the human race. The black bees do not possess that quietness and calm which are characteristics of the Italians.

Give me some good Italian bees of **comb honey stock.** Let whoever will take the blacks. Give us the same kind of a honeyflow. My gamble is ten to one on the Italian bees.

Free-Dumping Moulds

A little beekeeper always has a little wax and a big producer always has plenty to fuss with but big or small, here's one thing I have never found in a bee journal in the last ten years, **a free-dumping wax mould.**

I have used corn flake cartons, lard pails and galvanized pails but all these and several others had their faults. This fall as I scanned the crannies of the basement and thought of some better way, my eyes fell on the flower pots.

Flower pots, that's it! Get them large or small or start at the large and run right up the list, then you can arrange them like a conical tower and come out even with the batch. Do not use the glazed ones. Get a supply of corks in various sizes, plug the holes and let them soak in warm water and when the wax is cold, they just pop right out. The smoother the pot, the nicer the finish.

C. E. Phillips,
Ontario.

Who Accepts This Challenge?

In December, I see S. F. Haxton in "Who Can Say?" asks what is the longest time anyone knows of bees kept in one hive. I have kept bees here in the valley near Artesia, New Mexico, and also in the mountains west of here. While up there looking after my bees last summer, a lady beekeeper asked me to glance over her bees. While doing so I found a few dead colonies. One interested me because as I went to handle it, I found it very heavy and naturally thought it must have considerable honey left but on examining found that it was nothing but frames and combs itself.

The weight was due to the continuous use of the hive by bees. I asked the lady how long it had been occupied. She said that to her knowledge the hive had contained bees continuously for forty years. I do not doubt her word as it spoke for itself. The cells were so small you could hardly have gotten a match into them.

Emil P. Bach,
New Mexico.

Eggs in Queen Cells

I will take a crack at Latham. He said the bees did not put eggs in queen cells. Last summer ('34) when my man and I were working a yard of seventy-one swarms, we found over a dozen that had carried eggs up through the excluders. Some of the eggs had hatched. Every one of these eggs was properly placed in embryo queen cells. While this was the largest number I ever saw in one yard, and some seasons we don't see it, still it is common. We had raised the brood in all the extra strong ones. With one super of combs between the brood, almost all had started cells; then the flow stopped and most of the cells were torn down. When the flow started again, these eggs were raised. Did Mr. Latham or anyone else ever see a queen lay an egg in a queen cell? I doubt it. I have seen too many cases like the one I have just cited to think the queen has anything to do with it.

J. Simmons,
Idaho.

Search for Disease Resistant Bees

Arrangements have recently been completed for a cooperative experiment to determine whether there is really a substantial difference in disease resistance in different races or strains of bees. The work is to be carried on under a cooperative agreement which includes the Iowa Agricultural Experiment Station, the Agricultural Extension Service of Iowa State College and Dadant and Sons of Hamilton, Ill. The studies will be under the general supervision of Dr. Carl J. Drake, head of the Entomology Section of the Experiment Station and State Entomologist of Iowa. The project will be under the immediate supervision of Dr. O. W. Park, research associate professor of apiculture in the Experiment Station, assisted by F. B. Paddock, extension professor of apiculture and State Apiarist, and Frank C. Pellett, Field Editor of the American Bee Journal.

The work will be carried on at the Pellett Gardens, near Atlantic, Iowa. An attempt will be made to secure stock of all races or strains which are thought to be resistant to American foulbrood, for study and comparative test. Careful check will be made of all colonies to note behavior under uniform conditions.

If it can be scientifically proved that certain strains of bees are in fact more resistant than others, it should furnish a valuable basis for future breeding work, both by commercial queen breeders and by institutions where such work may be carried on.

Better Average Yields

While but few of the commercial queen breeders have taken time for any very methodical work in stock improvement, the general practice of selecting the best producing colonies from which to breed has resulted in better average yields. The beekeeper may not have known why a particular colony excelled. Whether it was because of longer tongue, longer life or greater carrying capacity of the workers, the fact that the colony stored a big crop of honey was of chief importance.

Every queen breeder has been watching for colonies which stored unusually large crops and the mother of such a colony has been chosen to supply the larvae for rearing young queens. This practice has resulted in the production of hundreds of thousands of young queens from such parentage and a total of many tons of additional honey has come to the purchasers as a result.

Garden Plants for Bees

The revival of interest in the old-fashioned herb gardens may be but a passing fad but while it lasts it offers attraction for the bees. Of course every beekeeper realizes that the amount of nectar which the bees can find in a garden plot amounts to but little. The fact that the bees do get nectar from a plant, however, always excites the notice of the beekeeper, even though the amount is too small to count in the sale of his crop.

In looking over the pages of the new book "Gardening With Herbs" by Helen Fox, one is impressed with the large number of good bee plants which are included in the list. Sage, savory, horehound, lavender, borage and rosemary have long been famous for their attraction to the bees. Numerous others are good nectar producers.

Even though his garden plot is small, the beekeeper wishes the herb gardener well and hopes that his interest will continue.

"The Bees Were Working for Pierce"

In the February Minnesota Horticulturist, J. A. Pierce, a fruit grower of Rochester, tells of his experiences with raspberries and plums. He mentions the presence of the bees among his blossoms and states that while they got some honey, "the bees were working for Pierce." This is very typical of the changed attitude of the fruit grower toward the honeybees in recent years. No longer does the fruit grower feel that the beekeeper reaps the principal benefit from the presence of the bees among the blossoms.

Well informed fruit growers understand that the bees play a very important part in the pollination of the blossoms and they are quite willing to pay a premium for such service.

While the beekeeper no longer has to face a hostile attitude on the part of the fruit grower, he does in many cases, have to be on the watch to prevent the loss of his bees through the application of poison used to kill the pests of the orchard. Now that the fruit growers have learned that the bees are working for them, it is highly important that they learn how to use poison in such a way as to protect the insects in their useful service.

Bees for Recreation

A large group of professional people keep bees to provide an interesting recreation. Persons whose work is very exacting or confining find in the apiary a wonderful place for relaxation. As one advertising manager stated it, a chance to forget all the many irritating details of the daily job is essential and this is what the bees offer a busy man. The industry owes much of its advancement to the interest of this class of people. Not being primarily interested in cash returns they have given much time to the study of the problems which present themselves to every beekeeper. Langstroth who made the greatest contribution of all was a minister.

Canada's Honey Federation

The beekeepers of Canada have launched a movement to give the same service to the honey producers of that country that the American Honey Institute renders to the industry on this side of the line. A meeting was held at Guelph, Ontario, on March 22 at which time about 75 interested persons made plans for the future of this special activity.

About $2500 was definitely pledged at the time of the meeting and with this sum available the sponsors felt justified in getting the work under way. For the present the organization will depend upon voluntary contributions for support.

Since some objected to the adoption of a name similar to that of the American organization, it was decided to call the new society "Canadian Honey Federation."

In the discussion of finance the weakness of the Honey Institute was recognized in that it has no dependable means of support and it was generally agreed that to be permanently successful the constant begging for contributions must be eliminated.

We on this side of the line are much interested in the Canadian venture and hope that it will be very successful. Our own work should be more useful because similar efforts are under way across the border and the Canadians should also get some benefit from ours.

It is fortunate that the importance of stable finance is foreseen and it is to be hoped that some plan of support can be found which will provide uniform and dependable income. With that assured there is an unlimited field for service to the honey producing industry. With increasing competition from many cheaper food products it is essential that some dignified agency be maintained to keep the public informed regarding the merits of our product. Every Canadian beekeeper should get behind the new enterprise.

Smoke

The old saying of fire, that it is a good servant but a bad master certainly applies when used in the bee yard. The invention of the smoker was one of the most important events in the development of present day beekeeping. Without it, it would be difficult indeed to control the bees, and honey production on the present day scale would be impossible.

Few, however, are really masters of this very useful implement. To use just enough smoke, at just the right time, is an art which is only developed with long practice. If properly applied but little smoke is needed to subdue the bees. When too much is used the colony becomes demoralized to the extent that several hours are necessary to return to normal. Such demoralization results in a loss of productive energy during a honeyflow.

The beginner with bees should give careful study to the use of smoke to the end that the bees can be controlled with a minimum of disturbance.

Distribution Costs

Recent figures indicate that for every dollar which the producer of food stuffs receives for his product, the consumer pays nearly three dollars. To require twice the production cost to get the product to the consumer is too much. It is this high overhead of distribution which reduces the producer's income to a painfully low point.

It would seem that some study might well be given to our present system of distribution in the hope that it can be improved. It is not an easy problem or the solution would have been discovered before now. A western advertising firm warns that the sales problem is one of conserving the consumer's dollar but just how this is to be done is not apparent with our present setup. Certainly we are not yet ready to dispense with the middle man. We would like to find a way to cheapen the cost of his services.

Price Limitations

It is probably fortunate for the beekeeping industry that there is no effort toward artificial control of the price of its products. Such efforts may bring temporary advances but usually do so at the cost of disaster as the final result. There are plenty of examples of this kind, notably rubber and coffee.

The factor which is most important in limiting the price of any product is not its scarcity, but the selling price of a suitable substitute. Raise the price of any product to a point higher than the public regards as just and it is always possible to find something which will serve in its place.

The price of honey is very largely determined by the number of cheaper sweets with which the market is so abundantly supplied. If we push the price of honey too far above these competitors we limit its sale to luxury consumption. Bakers who now buy honey by hundreds of carloads would not continue its use at a price very much above the present market.

Every beekeeper who retails his honey knows very well that the five-pound pails of corn syrup on the grocer's shelves limit the price which he can get for his product. When the consumer regards the price as too high he buys the cheaper product instead.

It is unfortunate for the beekeeper that corn syrup can be sold at so low a price. Whether we like it or not, most housewives regard corn syrup as a very satisfactory table syrup and because it is cheaper will continue to buy several pails of it for every pail of honey which they use.

As long as we produce more honey than the luxury market will consume we must sell it in competition with other sweets. Honey has qualities which the others lack but there is a definite limit above which the buyer will not go and we need to understand fully his viewpoint in setting our prices.

"Prepared Honey"

British beekeepers appear to be much exercised of late over the appearance in their markets of a syrup which is sold under name of "Prepared Honey." Vigorous protest has been offered to government authorities against the use of the word "honey" on the label of any product which is not in fact pure honey stored by the bees.

This brings vividly to mind the experience of the American honey producers in the years before the passage of the pure food law. For years sweets sold as honey was largely cheap glucose with a very small amount of honey to provide flavor. Maple syrup producers suffered in a similar manner.

While syrups which are a mixture of honey and other sweets are still sold in American markets to some extent, the requirements that their true character be shown on the label removes them from serious interference. Honey feels very keenly the competition of cheaper sweets, but the requirements of the pure food law prevent them from being sold for other than their true nature.

Common honesty requires that any product be sold on its own merits and the law which requires the label to show the contents of the package is a very reasonable and just one. It is to be hoped that our British cousins will receive prompt protection from fraudulent labeling of competing sweets.

Returns from Package Bees

In his recent bulletin on "Package Bees and Honey Production," W. E. Dunham, of Ohio University, points out the reason for the popularity of packages in the sweet clover areas. He states that in areas where the main flow is from white (Dutch) and alsike clover, packages made only a fair showing in honey production.

The reason is that the flow comes too soon to permit the package to develop into a strong colony ahead of the flow. Because of its later blooming sweet clover offers opportunity to make big colonies from packages in time to gather the harvest. Buckwheat offers a similar opportunity as does alfalfa.

Since a period of ten weeks is needed for a package to develop to the point of profitable honey production there is little chance for the beekeeper living in regions of early flows to make profitable use of packages. This indicates very clearly why so much greater volume of the package trade is in the northern plains region and in the western Canadian provinces.

Tragic Death of Douglas David Stover

D. D. STOVER of Mayhew, Mississippi, owner of the Stover Apiaries and, without question, the largest package bee and queen producer in the world was killed in an automobile accident on the morning of May 2nd in the outskirts of Tuscaloosa, Alabama. Mr. Stover was returning with his son, F. M. Stover and five of his employees from Helena, Georgia, where they had the day before packed and shipped several hundred packages of bees. The truck in which they were riding, left the pavement at a slippery spot in the highway and crashed into a giant oak tree. Stover was killed instantly and the rest of the occupants of the truck were more or less injured but will recover.

Mr. Stover had made beekeeping his life work. He became associated with his father after completing his education; and with other members of his family, was engaged in the business of producing honey with Mr. Hetherington in Virginia. On the death of Hetherington and the elder Stover, D. D. Stover acquired all interest in the business. In 1908, the business was moved from Virginia to Mississippi and in 1918 Mr. Stover acquired the business of the Penn Company of Penn, Mississippi. The business was later moved to Mayhew, Mississippi, at which point it grew to large proportions until the time of his death. In recent years, Mr. Stover also had engaged extensively in honey production in Michigan and Minnesota.

Besides being a leader of his profession in the production of package bees and queens, he had the happy faculty of being able to impart his knowledge to others. His queen yards and package bee yards are now headed by men who grew up in the business under him and are able to carry on in an efficient manner. In his office, he leaves his trusted and able secretary, Miss Katherine Chapman. Her experience and ability will keep the business of Stover Apiaries moving on an even keel.

Mr. Stover was also a manufacturer of beekeepers' supplies and was an ardent supporter of the American Honey Institute. Many times in the past when the Institute has been hard pressed for funds in order to continue its existence, Mr. Stover came to the rescue either by outright donations or by appeals to his customers for contributions. Every advertisement of his in the Bee Journals during the past several years has urged the support of the American Honey Institute and his personal contacts have made many friends for the Institute organization. He realized perhaps more than anyone else, the great good that the Institute is doing for honey and honey producers.

At the time of his death, Mr. Stover had queen and package shipping yards at Helena, Georgia; Natchez and Mayhew, Mississippi. More than sixty people were in his employ during the busy shipping season.

Douglas David Stover was born in Strasburg, Virginia, forty-seven years ago. He was the son of Mrs. Mary Margaret Stover and the late Francis Marion Stover and a direct descendant of Peter Stauffer who founded the town which became the first incorporated town in Shenandoah County, Virginia. He attended the public schools in Strasburg, Virginia, and then went into business with his father and as stated above, later moved to Mississippi.

He leaves his wife, who before her marriage was Miss Lizzie Grey Windle, two sons Francis Marion and Windle Stover, also two daughters Mary Virginia and Lenore Stover, all of Mayhew. He also leaves his mother, Mrs. Mary Margaret Stover, a sister, Miss Mona Stover and a brother, Mr. Frank C. Stover, prominent business man of Strasburg, Virginia.

Mr. Stover was a member of the Strasburg Christian Church. He was active in social and religious life of his adopted home in Mississippi and was one of the leading citizens in the section in which he lived. He is known to have cherished the hope that he might retire from active business to go back to Strasburg, Virginia, to live.

Mr. Stover had a kindly, lovable disposition. To know him was to love and respect him. His home was a haven for fortunate and unfortunate, alike. When one entered his home, he was made to feel welcome and at ease. He was generous to a fault and success to him meant only to be able to give his family and his friends the comforts and joys of life.

Thousands of friends will grieve Mr. Stover's death and the beekeeping industry has lost one of its most beloved and useful men.

How the Bees Tell Each Other the Trail of Scent

Professor von Frisch, of Munich, studying the problem of how bees communicate with each other in their quest for honey, has made a discovery.

When a bee finds food it at once brings a scent gland into operation, emitting an odor which forms a trail of scent in the air as the bee flies back to its hive in a straight line. The bee repeats this as it flies back to the newly-found source of food, and this trail is followed by the other bees and leads them to the food.

The scent glands are on the bee's back and the odor is spread by the movement of its wings as it flies. Thus it is by smell and not by sound that such information is spread from one bee to its fellows.

W. J. Sheppard,
British Columbia.

Step By Step With Comb Honey

By Lee R. Stewart,
Indiana.

COMB HONEY production is one of the most scientific phases of beekeeping and though it was followed in ancient times and down through the ages, it is still a fertile field for research and experiment. It is the art of beekeeping.

I have been asked to tell how I produce comb honey, not that I am an artist but probably because we are interested in knowing how the other fellow performs. You understand, of course, that a full discussion would fill a volume and I can but briefly touch upon the most important phases.

I use eight-frame equipment, more by accident than by chance but there is no question but what the accident would have eventually been my choice. It is not by chance that most of the high class comb honey producers use eight-frame equipment or some equivalent size. There must be a reason, and there are many. Briefly, a few of them are—easier manipulation (comb honey production requires plenty of skillful handling); more equipment for a given investment; more finished sections, meaning the ones that sell, and consequently less waste; and more normal working condition for the bees, whom we must never forget. I have handled and seen handled all kinds of hives but in every case they gave way to the eight-frame size for production of good comb honey.

However, it is immaterial whether you use the eight-frame or not, so long as you follow the eight-frame principle. The bees should come through the winter in good shape with a good queen and plenty of stores. I like to winter in a single hive without packing, though I sometimes wrap and this year I left on a food chamber. But a single hive body is my ideal, in fact the smallest space you can put the bees in with adequate stores I believe to be best.

And it does not take many stores actually to winter a colony of bees. This style of wintering will require work in spring and timely work.

As early in the spring as possible I examine my bees for disease, queenlessness, etc., and clip my queens. I follow this routine about every ten days until the honeyflow starts. Only in rare cases do I believe in equalizing brood. It is better in my locality to sacrifice the weaklings in favor of the strong colonies.

As the queen expands I add the second brood chamber but care must be taken that this is not given too soon; better be a little late. The "home" nest should be full to overflowing, right at swarming fever before the second brood chamber is added. That is why I like to winter in a single hive body. Then at the proper time I can utilize the food chambers as additional brood room. By having five or six of the frames in the latter extracted, depending upon weather and flora conditions, the bees will overflow into this new home and forget all about ever being crowded below. The wet combs do the trick. This is the second step in swarm prevention—the first being good young queens. If more room is later needed I follow the same plan, adding it on top, of course. However, the principle of comb honey production—a crowded, congested condition must always be kept in mind. **You must invite swarming; yet prevent it.**

This vertical plan of brood rearing seems to more nearly approach the tree conditions of the bee in the wild state. It is a tested fact that a queen will fill more frames with brood by the above plan than she would if they were arranged horizontally in one hive. When arranged horizontally six or seven frames, in rare cases eight, seems to be the limit of her best efforts. But if additional frames are placed immediately above these she will perform much better than if they are placed alongside of them.

I do not know the best working number for comb honey. I try to secure as many active bees as possible per colony. However, some of the best colonies I ever had were brooded in a single hive body. I always like to tell about these particular bees—they were headed by a supposedly golden queen from the South. They must have been a cross between a buzz-saw and a bear-cat. Mean!—They would meet me at the gate and follow me to the house. They never stung me—they just ate me. Needless to say I didn't visit them often and then under protest. When the honeyflow started and I gave them a super, with great pain, they didn't seem to have any bees at all. **But, believe it or not, they were the first colony in the yard to make a super of honey.**

I use the standard 4¼" section with full sheets of foundation and tops paraffined after they are assembled. I can get a No. 1 or better section with my system this way, produce it cheaper and get just as much for it in this day of the buyer's market. The top and bottom starter will produce more fancy sections and if the seller's market ever again reigns I will use the two pieces.

I like a good section, one that folds true and scrapes easily; but with proper management in this cellophane age you will get just as much for the comb of honey packed in the cheap section as the higher priced one; your loss will be less and your profit greater.

Remember, I said proper manage-

ment and quite unlike those who produce extracted honey all comb honey producers have losses. There will be sections that you take the time and expense to prepare that will not, or rather should not get farther than your honey house. On a recent visit to one whom I consider the best comb honey producer in the whole world I saw stacks and stacks of culls. I do not use bait sections as my system already had the bees working up. Too many bait sections either carelessly or purposely find their way on the market.

The first blossom is not a sign for me to rush my super on, nor ten days after. For I let the bees go ahead and store the first of the crop which is likely to be off-color in the top brood chamber. Also, due to the slowness and irregularity of the flow, it may contain an excessive amount of mineral matter. It is attractive, salable combs we are after.

When the flow is well under way I slip my super under the food chamber, which has served as an auxiliary brood chamber. As soon as this super is well on its way I remove the food chamber, shaking or brushing the bees on top of the comb honey super. If I have used a regular hive body for this extra brood chamber I sort the combs, trading the empties and sealed brood in the extra for unsealed brood and honey bound frames in the lower hive. Another comb honey super is added below the one already on. The food chamber is then given to a colony not strong enough for comb honey production, to finish. Sometimes the brood in it is used to form queen rearing nuclei and sometimes the brood in several is combined to build up a weakling. In any event these food chambers should be finished in a short time and as soon as they are, they should be removed and extracted.

Care should be exercised in arranging the frames of brood in the hive body you leave. The original plan of the brood nest should be followed as closely as possible. The imprudent placing of a single comb may induce swarming and the loss of a crop. During my regular ten-day inspections in the building up period and during the honeyflow I endeavor to replace every comb just as found. For the queen seems to have a systematic plan in her laying and if you should by chance get a frame of pollen among the brood you might produce a swarming instinct. I know of instances where an interchanging of frames induced swarming. In comb honey you have of necessity all the swarming inducements you need without borrowing more.

Some might think you were borrowing trouble where you reduce but it is not so dangerous if you properly arrange the frames in the hive you leave. You already have a lot of the young bees above in supers and the others in the habit of going up. It is difficult to break a bee habit if we want to, but this is one that we make well of. I believe this working up instinct of our bees is a fertile field for study—probably the best in the whole life of the bees.

Occasionally our best preventatives fail and a colony persists in swarming in spite of us. To thwart them and save the crop, shaking or artificial swarming is probably the better plan as you can keep up their morale this way, whereas other methods quite often are inducive to loafing.

Sometimes it is necessary to put on two comb honey supers at the beginning — depending upon colony strength and the amount of brood chamber you have removed. If one is added the second is put on when the first is well started, being placed under the first. This routine is followed during the flow, being careful not to over super. I would rather lose some honey than to have unfinished, light-sections.

I keep a careful check on the flow as indicated by the work of the bees and condition of honey plants. It will be necessary to make frequent trips to your pasture and figure out its duration. For I do not want to leave my comb honey supers on until the last drop is in. The tail end of a flow is likely also to contain an excessive amount of minerals which will produce a darker honey and we want to keep this out of our comb honey if possible. I do this by replacing the food chamber which has been extracted, putting it on top when the supers below are just about finished and there is not nectar enough in the field for another.

In an extended flow I will sometimes remove supers before all sections are finished, returning the unfinished. But I do not like this practice, as there is danger of spreading disease, if you have it (and anyone is likely to have it) and there will be some leaky sections and the ones that are cleaned out will present an ugly appearance, making your section look unfinished.

In my locality the Wabash Valley, with thousands of acres of heartsease, wild cucumber, cuckle burr, Spanish needle and a vine resembling the blue vine, on one side, and on the other side miles of hills and poor clay land that produce quite a bit of white aster, there is no excuse, except through greed, for unfinished sections.

But there are always cull sections from various reasons—travel stained, fallen foundation, under weight and in rare cases a queen will lay in a comb honey super.

Honey should be removed as soon as possible after it is finished, and there is no system better than the bee escape. The carbolic acid method is faster but your sections will not be cleaned of loose honey. With the escape the bees in the super will clean up all loose honey in open cells and burr comb before leaving.

A Brazilian Bee Book

Cartilha do Apicultor Brasileiro is the title of a newspaper bound book of some 350 pages which we have just received from the duly mails with the compliments of the author—D. Amaro Van Emelen, O.S.B. Translated the title would mean "Primer of Brazilian Apiculture."

However, we would consider the volume far more than a primer as it deals with practically all subjects of modern beekeeping as applicable in Brazilian honey production. The book contains some 200 illustrations and drawings.

Our compliments go to author Van Emelen in his efforts to increase the efficiency of Brazilian beekeeping and honey production.

The Lewis Cookie Contest

A Cookie Contest was put on this year the same as usual by the G. B. Lewis Company. They report unusual interest in the contest which was recently decided, with Mrs. Luella Mortenson, Wisconsin State Home Demonstration leader, as the judge.

Nearly three hundred contestants took part. Of these, thirty-five were given prizes. The judge reported very high grade entries.

First prize was won by Mrs. Paul Daellenbach, Brookside, Montana; second by R. DeGroat of Oskaloosa, Iowa; third by Mrs. V. H. Kaul, Route 2, East Stroudsburg, Pa.; fourth by Andy Leiper, Bagley, Wisconsin and fifth by Sisters of St. Benedict, Crookston, Minnesota.

This shows the wide geographical range of the contestants.

New Disease Bulletin

"Control of American Foulbrood" is the title of a new bulletin by F. B. Paddock, issued by the Extension Service of Iowa State College, Ames, Iowa. It is Extension Circular 212.

The bulletin is designed to instruct the novice in the nature of bee disease and to give instruction in dealing with it. It is intended to supplement a former publication, Bulletin 183 which gives information concerning the diagnosis of disease.

While the accepted methods of treatment of diseased colonies are described, prompt destruction by burning is recommended.

Copies may be secured by addressing the State Apiarist at Ames, Iowa.

Concrete Hive Stands

By W. H. Scholz,
Nebraska.

Hive stands are more important than many think. Concrete, on account of its durability and ease of forming in any desired shape, is a suitable material to use in fastening the hive stands.

One can make a sort of trough, divided into sections of desired length and use it as a form for making hive blocks. The blocks are two inches wide at the top, four inches at the bottom, six inches high and eighteen inches long.

We make two blocks for each hive of a mixture of six parts sand to one part cement. The concrete should be well tamped into the molds as tamping makes the blocks solid. If the blocks are to be transported any distance, they should be reinforced. One sack of cement will make about thirty blocks.

Illinois Vigilance Committee

By Harry Lefler,
Illinois.

Chief Inspector Duax of Illinois is promoting a new idea in inspection work which has considerable merit. He proposes state foulbrood vigilance committees. There will be around twenty members forming a committee in each deputy's district. Each member of the committee will have a card of identification signed by the deputy, by C. L. Duax and Mr. McLaughlan, Director of Agriculture. The opposite side of the card states that the Illinois Beekeepers' Association approves of the vigilance committee to assist in the control of American foulbrood, the members of which are to work without pay.

Their pay is indirect in that by helping others, they help themselves. This plan should do much good by keeping a better check on locality and by stimulating a desire in every beekeeper to keep up with his neighbor.

Here is a copy of the rules.

1. It is not necessary that they go out and inspect bees.
2. But it is necessary to keep a close watch on all the beekeepers in the vicinity of each member especially those that do not come to meetings. If it is felt that colonies may die through winter and robbing occur before the inspector can arrive, this early watchfulness is quite important.
3. Each member should proceed without making enemies. If there are beekeepers who do not care to cooperate, let them alone but report to the deputy inspector.
4. It is the duty of a member of the vigilance committee to be at local meetings and help the deputy, the secretary of the association and its president to hold educational meetings and to explain the facts of disease.
5. Watch carefully the movement of bees in the district.
6. Prepare a list of beekeepers and also travel with the deputy inspector if he wishes.
7. Do not bother those who know disease and how to take care of it. Keep out of trouble.
8. Each deputy is to be the adviser in all things and all reports should be sent to him.

400,000 Lbs. for Yakima

Honey production in the Yakima valley during the last year amounted to 400,000 pounds, according to figures compiled by Elias Nelson, local newspaper statistician. The price received by the grower averaged 5¾ cents a pound. A total of 6000 pounds of beeswax was marketed, the average price being 20 cents a pound.

I. L. Neill,
Washington.

Algaroba Seed

Since the publication of my article concerning Hawaiian beekeeping in the September number, I have had a number of letters, some of them requesting algaroba seed. I enclose a photo of Mr. W. H. Smith's little son, of Lufkin, Texas, and the algaroba trees Mr. Smith grew from seed I sent him early in 1934. He says the larger tree was eight feet two inches high and had grown a foot each month for several months.

Those who know the mesquite will see from this picture that the algaroba is not the same. It is closely related but not the same. I believe algaroba to be the world's greatest tree for producing honey and I believe that there are many places in the South where it might thrive. It is a rapid grower. It may grow 30 to 40 feet in height and bloom profusely over a long period producing enormous crops of beans which are very nutritious and valuable as feed for livestock. Once a few trees come into bearing in a pasture, cattle will spread them all over the country by their droppings as the seeds pass through the cattle unharmed for germination.

Mr. Gerrie Judd, III, manager of Molokai Ranch, told me that algaroba transformed Molokai from a desert into a profitable cattle and bee island. It might do the same for other places.

Algaroba from seed planted in 1934, at Lufkin, Texas.

It will stand extreme dry weather when once started and seems to thrive and grow to large size in soil that is almost all rocks. I will be glad to send a few seeds to readers who will enclose postage. Address me at the Alexander Young Hotel, Honolulu, Hawaii.

H. E. Coffey,
Hawaii.

Current Uses of Beeswax

By Roy Grout,
Illinois.

BEESWAX was used by the ancients much more universally than it is used today. This was largely due to the fact that honey was the only known sweet and beeswax was readily obtained when the comb was crushed to get the honey. We must also note that there were few other waxes or wax-like compounds to which to turn except the softer tallow.

The first mentioned use of beeswax is in ancient mythology. Daedalus, an Athenian, after killing his nephew, was forced to flee with his son Icarus to Crete. Here they made themselves wings of feathers using beeswax to construct them. They then took flight from Crete and Icarus flew too near the sun which melted the wax. He consequently fell and drowned in the sea near the Island which is named after him. This, of course, is more legend than truth.

Beeswax was used in the first century by Dioscorides who rolled it into thin sheets and made artificial flowers from it. The ancients down to the Middle Ages used tablets covered with a thin layer of wax on which they corresponded by writing with a metal style. Both in the Roman era dating from 150 A. D. to 500 A. D. and in the medieval era following it, we find beeswax used in making a cold cream which is not essentially different from the modern cold cream of today and in making of Apostolic ointments. The use of this ointment reads as follows: "It consumes corrupt and dead flesh and makes flesh soft which is hard, cleanseth wounds, ulcers and fistulas and restores flesh where it is wanting." This sounds a good deal like a modern advertisement.

One of the principal uses of beeswax during this time was modeling, due to its plastic quality. It became a fashion to model the wax profiles, death masks and even life size figures of celebrated individuals. Those of Louis XIV of France, Anne of Austria and James II of England and many others are now preserved in museums. At this time witchcraft was common and Cowan in "Waxcraft" reports that it was the custom with witches to make profiles or masks of their intended victims in beeswax, thus the more easily to scare them into submission.

Beeswax also played an important part in furnishing light. The first candle was a column of wax containing a wick which was in reality the pith from a reed. In the 4th Century during the annual ceremony of the paschal candle, a large wax candle was blessed and placed on the altar the day before Easter. This candle was just a wax column and not intended for burning since it contained no wick. As early as the time of King Constantine, it is recorded that the entire city of Constantinople was ordered to be lighted with candles.

What Is Beeswax?

If we ask a beekeeper "what is beeswax" he will probably tell us it is a product secreted by the bee from wax glands located on the underneath side of the abdomen of the honeybee. The pharmacist defines it as a product obtained by melting and purifying the honeycomb of the bee. The economist calls it the by-product of honey production. The chemist tells us that beeswax is a mixture of chemical compounds rather simple in structure, fatty in nature, being 12-16% acids, 70-82% esters, 6% hydrocarbons plus 15 to 20 other compounds including alcohols, cholesterols, a lactone, coloring matter, etc.

Anyone familiar with beeswax, especially one who has worked with it, will tell you that all this is true, but also that it is never constant and that it is a great deal like a fickle old woman. It varies with the region of flora from which nectar and pollen is gathered whence, of course, it gets its origin. It also undoubtedly varies with the bees or races of bees that produce it just as milk varies in different breeds of cattle. To compensate for this variation, specifications put out by various departments such as U. S. Pharmacopoeia and the United States Navy Dept. give certain limits within which the physical and chemical characteristics of beeswax must fall in order that it can be called pure beeswax. Unfortunately, this is necessary but the limits are not exacting enough and certain beeswax bleachers and refiners all over the world sell adulterated products which certainly are not pure but often fall within the limits of these specifications.

Volume Consumed

The ordinary layman and beekeeper usually has little idea of the amount of beeswax produced or of the amount used in the United States annually. There seems to be no good way to arrive at precise figures of annual production. It will suffice to turn to government statistics which place the total beeswax production at approximately three million pounds annually. The same reports show an average of four million pounds of beeswax imported annually during the same period of time. It is indeed surprising to note that more beeswax is imported into this country than is produced by United States beekeepers; that foreign countries furnish four-sevenths of our total beeswax consumption.

This beeswax is imported from Brazil, Cuba, Chile, Egypt, Portugal, Dominican Republic, Germany, United Kingdom, Mexico and Africa. The principal reason for this large importation is that the great bulk of the imported beeswax will bleach readily upon exposure to sun. It is, of course, common knowledge that taken as a whole United States beeswax will not bleach in this manner. It is also stated by various importers that foreign beeswax is more uniform in quality and has a slightly higher melting point. The remaining quantity of imported beeswax is purchased principally due to its low price and comes largely from Africa. Thus we have an explanation for the fact that there is not a highly competitive market in this country which, of course, would result in a more favorable price to the beekeeper for his beeswax.

Uses of Beeswax

In earlier years it was necessary for the general trades to use beeswax in relatively larger quantities since they had few other waxes or waxlike compounds to which to turn except the softer tallow. However, chemical research and inventions of processes for making and refining paraffin and other mineral waxes, the development of some of the vegetable waxes such as carnauba wax and the recent hydrogenation of oils such as cottonseed oil, have made the production of beeswax look like a fly on the landscape of wax production.

Let us again turn to government statistics. Here we find that during the period from 1928 to 1932, this country exported an average of 84,000,000 pounds of paraffin annually. During the same period they imported 10,000,000 pounds of vegetable wax of which 7,000,000 pounds was carnauba wax, 10,000,000 pounds mineral wax and 36,000,000 pounds paraffin wax annually. This alone makes a total importation of 56,000,000 pounds of wax annually or fourteen times as much as the beeswax imported during the same period. It is probably safe to assume that from

100,000,000 to 150,000,000 pounds of wax is produced in the United States annually. This is from thirty to fifty times as great as the domestic beeswax production.

The beekeeper will naturally presume that the first and foremost use of beeswax is in the making of bee comb foundation. However, it is not likely that much more than one million pounds are used in the United States each year for this purpose. This, of course, leaves a majority of even the domestic beeswax to be used in the general trades.

Church candles originally were made of pure beeswax. For a long time this country was considered a mission country by the Catholic church. Due to the scarcity of beeswax, the availability of other materials and economic conditions, allowances had to be made until at present the Catholic church requires that sacramental candles contain a majority of beeswax. Candle makers today make three different mixtures of beeswax into candles, namely: 51%, 60% and 100% beeswax. The Greek Catholic church requires their sacramental candles to be 100% pure beeswax.

It is probable that more beeswax is consumed in this industry than in any other single industry in the United States. Some idea of the size of this industry may be obtained from the fact that recent code figures rate it as being ten times as large in its volume of business as the beeswax bleachers and refiners' industry.

At present, the Catholic church in its effort to change from methods allowed during this mission period and to return to the orthodox, are showing a tendency to return to the pure beeswax candles. It is also true that some experiments would seem to indicate that pure beeswax candles burn with less smoke than other candles. A consequential saving in decoration of walls and ceilings of large church buildings would far more than offset the extra cost of pure beeswax candles over the less costly kind. Other recent experiments have shown that the cost per burning hour of pure beeswax candles is actually less than that of the 51% and 60% mixtures.

Another large use of beeswax in this country ranking on a par with the bee comb foundation industry, if not ahead of it, is the production of cosmetics, particularly cold creams. Practically all creams of the cold cream type contain from 8 per cent to 15 per cent beeswax. The pyramidal way in which the consumption of cold creams have expanded in the past twenty years, has undoubtedly taken up the slack of the shortening demand for beeswax in various other industries.

The use of beeswax for the face is not a new idea. It is said to have had its origin in China centuries ago, where the Chinese women gave themselves a "facial" by melting beeswax in boiling water. They subjected their face to these fumes, just as the girl of today steams her hair, but the Chinese lass was very careful to confine the fumes strictly to her face. Look to what lengths the poor Chinese ladies have led the women of today. Cleansing creams, cold creams, vanishing creams, liquefying creams, lipstick and what not to make the face soft and smooth and attractive. And the men have some cosmetics, too, in the shape of shaving paste, mustache wax, etc., using some beeswax.

An interesting development which occurred recently was the advertisement by radio of a cold cream which did not contain any wax at all, warning people that wax clogged the pores. This, of course, aroused an animosity among various members in the beekeeping profession and letters were written asking the discontinuance of such advertising which was, of course, harmful to the beekeeper. This advertising has now been discontinued by this company. Prominent cosmeticians have told us that beeswax due to its therapeutical value and to the fact that it makes an emulsion, having a high sheen and a fine texture, will probably never be replaced by the other products in the production of fine cold creams.

The pharmaceutical trade uses consideral quantities of beeswax in their formulas for various salves, ointments, pomades, cerates, sticky wax, tooth wax, etc.

The dental trade uses quantities of beeswax in making impression wax made from pure beeswax sheets for the purpose of checking tooth position, pink base plate wax which is used in building up preliminary plates of false teeth and other wax products containing up to 75 per cent beeswax.

Polishes for floors, furniture, automobiles, shoes, leather, buttons and stoves require varying amounts of beeswax in many of their formulas. More recently beeswax in the production of floor polish has been largely replaced by carnauba wax. Also the increasing popularity of non-buffing waxes, that is floor waxes that dry with a luster, have further reduced the amount of beeswax used in this manner since carnauba wax is the essential wax in polishes which will dry with a bright lustre. It is of extreme interest to note, however, that a public service bureau of 1932 rated ordinary floor waxes and furniture waxes containing beeswax higher than brands then current upon the market. This rating included the non-buffing waxes.

In foundries beeswax is used in making patterns for small castings. It is used in the shape of round or triangular fillets for rounding the corners of patterns and in sheeted form for various purposes. Foundries also use a hard wax and a modeling wax.

Beeswax in the production of modeling wax has been almost entirely replaced by modeling clay and other plastic materials. About a year ago the Iowa State Beekeepers' Association mentioned this as a possible outlet for beeswax and some very worthwhile work was done on this problem at Iowa State College. Additional work was then done by certain members of the beekeeping industry with results that the modeling material has been developed which has for its basis beeswax. It has the same degree of plasticity but has the added advantage over ordinary modeling clay of being permanent in its texture and approximately 50 per cent greater bulk per pound. It is believed that it will meet a ready market in the three principal fields of its use, the artists, the school and the toy field.

Beeswax as an electrical insulation is probably not used to as great an extent in this industry as is commonly thought. The cheaper waxes, principally paraffin, and new resins which are being developed are gradually taking its place in the production of insulated cables, switchboards, etc. Beeswax will only return to importance in these channels of trade when the price of competing articles rises above the price of beeswax.

In this paper it will suffice to list a number of materials in which beeswax is used in industry to some extent. It is the writer's belief that in general the use of beeswax in these fields is limited and has in a great number of places almost entirely been replaced by cheaper materials, e.g. paraffin and various artificial resins which have more or less recently come on the market. These are as follows: adhesive compositions, acid bottle, waterproofing purposes, chewing gum, grafting wax, lithographic inks, writing inks, leather dressings, electroplating and etching, colored crayons, wax figures and ornaments, lubricating purposes, paints and varnishes, wood fillers, carbon paper, waxed paper, polishing lenses, sealing wax and thread wax.

The question has often been raised if on account of the rapid substitution of other waxes, beeswax will not in time go begging on the market and become cheap in price. The fact remains, however, that over a period of years the actual consumption of beeswax has increased. This is due to the discovery of new uses and to the increased volume in certain channels of the general trade. For example, Arthur D. Little, a prominent consulting chemist, has made the statement that probably more candles are being consumed today than were consumed one hundred years before the invention of electric lights. The pyramidal expansion of the production of cosmetics has also exerted a

large influence in this respect. Also it is true that the production of beeswax is such a relatively small portion of the total wax production as to make it not a great item in any one channel of trade.

We should bear in mind, however, that our markets are more competitive than they have ever been and the selfish preservation of our markets which has caused for example the reduced use of beeswax in the electrical insulation industry, should encourage the beekeeper to do his utmost to further the uses of beeswax wherever possible in the general trade. It is apparent that much experimental and extension work is required to encourage and induce the beekeeping profession to produce a high grade of beeswax, uniform, more highly refined and consequently more readily marketed. Perhaps the manifold expansion of the American Honey Institute amply financed, of course, could include such work.

Sacbrood

By John S. Saviello,
New Jersey.

Sacbrood is a disease caused by a virus that attacks the larvae of honeybees. The exact cause of sacbrood is not definitely known. The larvae is killed just after it is extended in the sealed cell. Adult bees remove the cell capping and expose the dead larvae to the beekeeper, showing the forward portion of the larvae to be a dark mottled brown. The foreportion of the larvae is much darker than the posterior region. This forward part is a dark brown, nearly black, while the rear is only slightly discolored.

Upon bursting the larvae by pressure between the thumb and forefinger, the beekeeper finds the contents to be watery. Do not confuse sacbrood with foulbrood, either of the American or the European variety.

Here are the indications of sacbrood:

1. The larvae dies after the cell is sealed.
2. Larvae turns dirty brown, with the head almost black.
3. Slightly yeasty odor to larvae.

The disease spreads slowly, fortunately, allowing beekeepers to stop the deaths of his larvae before it has spread to incurable limits. The best way to prevent sacbrood is to buy vigorous Italian queens from reputable dealers. For some reason, a strong queen will stop sacbrood from wrecking havoc with larvae in their charge.

At Last, a Perfect Honey Bar

The two pictures show a honey bar developed by Chas. D. Handel of Savannah, Illinois. The bar is about the size of the ordinary five-cent candy bar but is made with pure chocolate, honey, milk, and nuts according to a formula which Mr. Handel has worked years to perfect.

It compares in flavor and taste every way with the very best five-cent bars and retails at that price over the counter. It has the appeal of a pure product. Mr. Handel has been interested in candy making a long time and years ago developed a pound package of honey candies which were very good, indeed.

Many beekeepers would do well to look into sidelines as a means of disposing of a part of their honey crop. The public is willing to accept honey in many food products provided the items are in every way equal to competition.

German Pollen Book

A fine treatise on pollen has recently come from Germany, a bulletin written by L. Armbruster and J. Jacobs entitled "Pollenformen und Honigherkunft - Bestimmung." The book as we would surmise has to do with the forms of pollen and their influence upon honey production.

For anyone who has in mind to make a study of the pollens or to learn more definitely just the different forms of pollen in different flowers, this book would be invaluable. It contains some 900 diagrams of different pollen forms of plants.

Naturally, most of this has to do with the German plants which are native to Germany. This, of course, includes many of this country.

The book can be obtained by remitting International Money Order for $1.00 to publication of Archiv fur Bienenkunde, Berlin-Zehlendorf, Schreberster.22, Germany.

Round Five-Gallon Can for Wax Rendering

Rendering wax on a small scale may be done conveniently in a round five-gallon can in which some brands of lubricating oil are sold. These cans are of much heavier metal than square cans and have removable tops. The only other equipment necessary is a burlap sack and a stick. The sack is half filled with comb and the can two-thirds filled with water. When the water is brought to a vigorous boil the sack is poked continually with the stick until all or nearly all of the wax comes to the top of the water. When the water cools, the wax will be found in a nice layer on top. Remelting the wax slowly in a small can, say a one-pound coffee can, will precipitate the propolis and waste to the bottom of the cake, from which it may be cut off. If the wax is wanted light in color, running it through a solar wax extractor after rendering will bleach it.

S. F. Haxton,
Pennsylvania.

Southern Honey Baby

By Elmer Carroll,
Michigan.

Thanks to a good honey crop and to contributing factors, my wife and I are able to winter in Florida this year, thus fulfilling a wish of long standing.

Among our neighbors here at Penney Farms, is an interesting person, Mrs. Arthur Spencer. Interesting because while her family does not have bees, they are real honey enthusiasts.

Above is a picture of the Spencer's youngest daughter, Mary Elizabeth, taken at nine months of age. Mary Elizabeth is a real honey baby. Being a bottle baby she was fed honey and milk until six months of age when she was allowed zwieback soaked in milk. The recipe for the zwieback follows, interesting in that it contains honey, also because we never made zwieback before.

½ cup scalded milk (cooled to luke warm)
6 tablespoons honey
1 teaspoon salt
½ yeast cake
1 tablespoon butter
4 cups sifted flour
4 eggs

Mixing: Soften the yeast in ¼ cup luke warm water. To the milk add the salt, honey, and shortening. Then add the yeast and mix thoroughly. To this add one half the flour or 2 cups. Beat thoroughly until smooth then cover and set to raise in warm place (80° F.).

Kneading: When quite light or full of bubbles, or after 1 to 1½ hours if yeast is good, break up this sponge and add beaten eggs and rest of flour or enough to make a dough that can be kneaded. Knead until the dough is smooth and elastic and no longer sticks to pan or fingers. Cover and set to raise again for two hours. Knead down and divide into two small loaves, set to raise again in bread pans for two hours or more or until 2 to 3 times original size. Bake first 15 minutes at 390 degrees then 25 to 30 minutes at 360 degrees. Cool on racks.

We enjoy Florida orange honey on our breakfast fruits such as grapefruit and oranges, but were as tickled as a couple kids when M. N. Dillon of Porterholm Apiaries, Adrian, Michigan, called on us after the Valdosta meeting and left us a nice comb of Michigan honey.

News from Oklahoma

By Clarence J. Tontz,
Oklahoma.

There is a movement in our state legislature to abolish apiary inspection work. Oklahoma is a young state and there are many things in it that are far from perfect. Our legislature wants to cut expenses so it strikes first at the administration which seems the least useful.

However, the beekeeping industry is growing in Oklahoma and honey products add much to the income of the state. Should inspection be abolished, the plight of the beekeepers a few years from now will be bad. What few diseased colonies now exist are enough to spread disease over the state and eventually into adjoining states, bringing discontent and discouragement among beekeepers.

According to L. J. Austin, state apiary inspector, there were more than ten thousand farmer beekeepers in Oklahoma when the 1920 census was taken. This is not counting beekeepers living in towns. By now there are undoubtedly a greatly increased number and yet it costs the state less than $30 per county to keep the inspection work in effect.

March was generally fair here with the exception of a few cold nights and several dust storms. A small portion of the early blooming peach and apricots were killed. In several parts of the state severe hail beat down small vegetation. In the early part of April, plums, peaches, and pears are about through flowering. The early varieties of cherry and apple are beginning to bloom. A northerner came on the 30th of March and the fruit escaped being nipped by a hair's breath.

In examining bees, I have been surprised to find that they are abundantly supplied both with honey and bees due undoubtedly to our mild winter, with only brief cold periods. Our problem this year will be to persuade the bees from swarming.

Swifts Broadcast Honey Ham Recipe

On the Saturday night broadcast of Swift & Company, a recipe was broadcast for cranberry ham slices as follows:

Take 2 cups of raw cranberries with 1 cup of strained honey. Spread thickly over a center slice of Swift's Premium Ham, top with a second slice of ham. Insert whole cloves around the edge of the top slice. Place in a dish and bake about 1½ hours until done in moderate oven, basting occasionally with the liquid. Garnish the top slice with cranberries. There is no parboiling to do.

This same recipe was also published in the March issues of Good Housekeeping and McCall's Magazine, possibly in other papers. In Good Housekeeping magazine the ham so cooked with honey and cranberries is pictured in full color, setting on the table with a dish of fruit and a carving knife ready to cut and eat.

Thank you, Swift & Company. If beekeepers appreciate this kind of help, let them write to Swift & Company, Chicago, Illinois. A few letters or postcards won't do any harm.

Honey in This Pitcher

Kellogg set up Old Mother Hubbard and her box of Rice Krispies along with a glass of milk and a pitcher of honey. These artistic food pictures are made in quantities by the Kellogg Company for use in various ways. A number of them show honey with the cereals.

Since Kelloggs make cereals day and night all through the year, the honey message is carried all over the world by their tremendous distribution system.

Bees Do Not Suffer from Poison Bait in Manitoba

By H. E. Wood,
Assistant Director of Extension Service,
Manitoba Agricultural College.

IN THE DECEMBER ISSUE of American Bee Journal under an editorial "More Trouble from Poison" you state—"The use of poison for control of pests is certainly being overdone and it is high time some check be put on its careless application, not only are honeybees being generally destroyed, but much useful wild life and occasionally domestic animals are killed." While no doubt the writer of this editorial had in mind the widespread application of poisoned bait as a means of grasshopper control, he apparently failed to appreciate this most serious grasshopper menace of all times that has faced agriculture for the last five years in the Great Central Plains area; also the widespread and very successful measures that the governments of both the United States and Canada have taken, upon the recommendations of leading entomologists on the Continent to combat this menace which necessitated the use of poisoned baits on a wholesale scale.

The writer will confine his remarks to control measures that were taken in the Province of Manitoba, Canada —where in 1934, some four million acres of cereal crops were involved out of a total of over 50,000,000 acres in the Central Plains area. Poisoned bait was used by 18,500 Manitoba farmers, this being the fourth year in succession that many of these same farmers had no recourse but resort to the spreading of bait to protect their crops. While it is not claimed that such baiting has exterminated hoppers it is universally claimed that had poisoned bait not been made available many farmers would have harvested little or no crops whatsoever. A careful survey has recently been made by government officials which shows over the infested area for the past season a total of 13,566,000 bushels of grain valued at $7,347,000 was saved from grasshopper destruction. This saving was effected for a total outlay of approximately $100,000 on the part of the government and municipalities for bait materials and mixing. Equally successful results are reported by the other two Western Provinces and the North Central States that conducted similar extensive poisoning campaigns.

As to the effect of poisoned bait on wild life I can do no better than mention one of the extensive series of experiments that have been conducted recently. Mr. F. E. Whitehead, in Bulletin No. 218 of the Oklahoma A. & M. College, gives the results of tests with domestic fowl, quail and nesting insectivorous and song birds. Grasshoppers were fed by hand. Birds the size of robins ate 134 hoppers containing 39.98 mgrs. of arsenic and matured normally. Mr. Whitehead concludes by stating there is very little danger to nesting and adult birds, and no danger to humans from eating fowl that have eaten poisoned grasshoppers.

In Manitoba similar results were obtained from the analysis of Franklin gulls purported to have been poisoned through the spreading of grasshopper bait. Not a trace of arsenic could be detected.

Following the spreading in 1934 in Manitoba of 13,800 tons of bait, 53 of 67 municipalities report not a single loss of any kind of stock while 14 municipalities report only a total of 31 animals killed.

The destruction of honeybees is claimed. Perhaps nowhere in the Great Central Plains area has more attention been paid to the development of the bee industry in the last ten years than in Manitoba. Outstanding success has followed these efforts, a total of nearly ten million pounds of honey being produced in the years 1932 and 1933. This has been achieved largely in the eastern half of the Province where the heaviest grasshopper infestation has been and where the larger part of the poisoned bait has been spread. Probably in the last two major grasshopper outbreaks experienced in Manitoba when a total of nearly a thousand tons of arsenic was used by the government, more poison has been spread in the form of grasshopper bait than for all other purposes since agriculture was first seriously considered more than 60 years ago. Some leading beekeepers have been foremost advocates and users of poisoned bait. While a few individuals may have claimed loss of bees due to grasshopper bait, beekeeping in Manitoba can be said to have enjoyed its most prosperous period in a time when unprecedented amounts of poison have been spread over large areas by people who had little previous experience in its use.

Spray Poisoning in the Yakima Valley

By W. C. Wixom,
District State Inspector,
Washington.

SPRAY POISONING of bees is a subject about which the beekeepers of Yakima Valley can talk from experience as they have had to contend with it for many years. The main poisoning in former years has come from orchards sprayed with lead arsenate. It has been and still is necessary to spray eight or ten times a season. In 1934, some orchardists sprayed every day the wind did not blow. Any apiary within flying distance was subject to daily poisoning.

Many beekeepers are of the opinion that if there is no bloom on the trees, or on the clover or alfalfa that may be in the orchards when the spray is applied, the bees will not be poisoned. But where lead arsenate is used with nothing mixed in for cover, the bees will seek the spray and have even been know to go over fields in bloom to orchards that have been sprayed. Then, too, bees within flying distance of orchards during fruit bloom, establish themselves and, unless moved, continue to visit the orchard with heavy losses to the colonies and in the production of honey.

Because of the large areas in the Yakima Valley devoted to alfalfa and potatoes, commercial beekeepers have previously been able to move their yards some distance away from the source of poison, thus greatly reducing the losses, in some cases avoiding them entirely.

In 1933, however, it became necessary for the first time to spray for the Colorado potato bettle on a large scale. As many as six applications of lead arsenate were applied by some growers. Some districts were much worse than others but the average was around four or five sprays. Much garden truck is also sprayed, especially sweet corn and asparagus. In early spring cut worms bother and cantaloup growers mix lead arsenate, flour, and molasses to a paste to apply around the young plants. These practices also cause heavy losses among the bees.

A survey of the spray problem was made in the fall of 1933 when it was estimated that there were 12,000 colonies in Yakima County, and that 3,000 of them were killed outright by spray poisoning. A conservative estimate of the average crop for the remaining 9,000 colonies was twenty pounds per colony, a sixty pound per colony loss.

The most general belief among beekeepers is that early morning is the time of greatest loss. This is

probably because the flowers not being open then, the bees go to the dew and water on the sprayed foliage and, being particularly attracted to the lead arsenate, they readily take up this moisture and carry it back to the hives. As a result the bees die within a few hours.

Pollen has also carried the poison where dusting has been done to kill insects. When this pollen is fed to the larvae, they are killed. Some think the death due to bee disease.

Bee men do much moving to escape the spray but they often move into a worse location without knowing it. Many are looking for locations in other parts of the state. A few tried moving a mile or two out, in sage brush. This proved to make matters worse as the bees had only one way flight and poisoning seemed to be heavier than in the midst of the alfalfa and potatoes where there was four way flight.

One yard, moved into the sage brush, had 116 colonies early in August, but dropped to 75 colonies by September first, a loss of 41 colonies in about a month. The remaining colonies did not have enough stores for winter, so the yard represents practically a total loss to the beekeeper.

Moving into the orchard districts after the spray season did not show any gains as compared to the yards that remained in the alfalfa and potato districts. A small yard, moved into the orchard district the first of October, showed signs of bad poisoning the day after. Another beekeeper who had about 200 colonies had a loss of half his bees and no honey for market. Another had a loss of 300 colonies and a crop average of only 40 pounds per colony.

In discussing possible means of reducing losses from spray poison, it has been thought that if calcium arsenate, Paris green, fish oil or other oil sprays were used the heavy losses would be avoided. Several beekeepers exchanged the farmer's lead arsenate for calcium arsenate.

Bee men have really learned to dodge the spray quite well and if fruit men were the only ones allowed to use lead spray it would be quite a relief to the beekeepers. As the matter stands now, Yakima beekeepers are looking for locations in other parts of the country.

Acme's Almonized Gloves

In Harper's Bazaar for February, page 116, is an announcement of what is called "Acme's Almonized Glove." It looks like any ordinary glove but the inside is treated with glycerine, almond oil, honey and wax for the purpose of keeping the hands smooth and soft. A new idea. Honey is now in pipes, golf balls and gloves. Can't somebody think of some other use for honey besides these?

Valdosta Echoes

By Alfred H. Pering,
Florida.

MY ATTENDANCE at the Valdosta meeting proved to me again that I can learn more at a big bee meeting by listening in than by doing much of the talking myself. During most of the time of the Southern Conference when there was not a session going on, the delegates would gather in "knots" and swap ideas. Some of these ideas, it seems to me, are worth repeating, as the knots were frequently small and only a few heard the good things.

I am going to pass some of them along so that he who reads may run and learn of them.

Noticing a little bunch gathered about our Canadian friend, J. C. Rippingale, of Oak Bank, Manitoba, I stepped up to listen and here are a few points from the receiving end of the package bee business:

Mr. Rippingale says, that it seems some of the shippers do not realize that there is a great difference in the degree of temperature of the weather between the starting point of a package and its destination. When the bees are shaken in, they are comfortable enough and are scattered all over the cage but when they arrive in Canada, the weather may be cold and the bees protect themselves with clusters and too often they cluster at one end of the cage or away from the feed can. The metal can and the feed gets cold and the bees wanting to avoid that cold spot, cluster at one end or the other and so they are away from the source of feed and if held there long enough, they are lost both to the shipper and purchaser, by starvation, or to say the least, they may be injured and short lived.

The remedy for this, suggested by Mr. Rippingale, is to encourage the bees to cluster about and under the feed can. He thought the feed can as now used was too tall and should be shallower, and in order to maintain its capacity, it should be larger in diameter. This would bring the feed higher up and so afford more clustering space right under the can. Then there should be something fastened all around the can and to the under side of the top of the cage, for the bees to hang on when roughly handled or when receiving a jolt.

Someone suggested that if the cans were enclosed in a rather loose fitting cloth sack with the bottom out so the cloth would not interfere with the opening in the can or the feed hole, this would furnish a secure hole for the bees while clustering about the can. If the cloth extended a little over the ceiling of the cage a short distance about the can, this too would furnish additional space to hold and sustain the cluster and also keep the bees in reach of the feed supply.

There should be but one feed hole punched in the lid of the can. This hole should be very small. Bees can suck the feed through a small hole, but they cannot stop a hole that is too large. The cloth cover sometimes used is apt to get clogged if the feed is too thick and if too thin, it will pass through too fast. More than one hole, especially if large, will cause the loss of the vacuum when jolted and the constant jiggle, jiggle of the train, especially when passing over railroad crossings, will cause too rapid let down of the syrup.

Mr. Rippingale thinks the cage in which the queen is confined with her attendant bees should be suspended very close to the feeder can. The bees will then be more likely to cluster about her and hold the temperature up around her. If she is suspended at one end, or even midway between the end of the package cage and feed can, the bees get jolted to the bottom of the cage while in transit and may crawl up and cluster at the opposite end, thus exposing the queen as the cluster is not large enough to cover her. If the queen cage is close or touches the feed can, then overflow of the cluster will reach her as the full cluster should fill more than half the cage.

If some device was used to enable the purchaser to remove the feeder can more easily, it would be a very great convenience, especially to a beginner. It is not everyone who thinks of turning the package almost upside down to start the can. Directions say to place the cage down in the hive to one side and then to release the bees, etc. When the cage is placed in this manner, it is difficult to get hold of the can in order to draw it up out of the cage. If there were some sort of thumb and finger holds cut down in the wood, that encircles the can, to enable the thumb and finger to grasp the feed can, it would help mightily.

Another convenience would be some means to remove the cage containing the queen before releasing the bees. This could be devised by having a hole right alongside the feeder can just the right size to admit the insertion of the queen cage endwise. The queen cage could be held in place by nailing a piece of tin over the end too large too pass through

the hole, thus suspending the cage. When the top wood cover is removed, that covers the opening for the feeder can, then the queen cage is easily lifted up by slipping the finger nail under the can. As the cage is brought up gently, the bees are scraped off and just at the time the bottom end of the queen cage passes out, a piece of tin, cardboard or anything convenient may be laid over the hole until the queen cage is prepared and placed in a position for introduction and you are ready to remove the feeder can then and release all the bees.

I got the impression from Mr. Rippingale's conversation with bystanders that he felt from his experience at the receiving end of the package bee shipping business, that in introducing the queens received in or with packages, it was very important that the attendant bees be removed before introduction was attempted, no difference even though the attendant bees are of the hive from which all the bees were taken. He also thought the very best introducing cage was simply a cloth tube, made of some very porous material, coarse enough to allow free ventilation and the feeding of the queen by the bees through the cloth, if she did not help herself to the feed furnished to her which was to be placed in one end of the cloth. This tube should be about the size of one's small finger or just about right for the comfort of the queen. The open end of the tube after the queen is run in should be closed and the cage suspended between frames of foundation or of combs. This then does not require spreading of the frames making room for the building of burr combs which is necessary in order to insert an ordinary mailing cage. No extra frame is needed to care for while the queen is being received for as soon as the bees eat out the candy in the lower end of the cloth tube, the queen is released and the package bees are ready to receive her.

I had a whale of a good time at the Valdosta meeting and got home without any more accidents so there will be no confusion in reports or hoping for the recovery of a victim.

Imagine my surprise when someone buttonholed me and said, "I like the old box hive the best. I've tried patent hives but they get worms in 'em. What hive do you use?"

I told him that after trying almost all makes, I was using Modified Dadant. He said he had tried that too but they had more worms in them than any other. After asking some questions, I found that he used the old box without a cap. He knocked the top board off once a year and cut out all the comb honey he could and had never seen into the bottom of the hive below the honey. He said he had tried the deep patent hive with one story and when he opened and lifted out a sash, he always found too many worms and not enough honey. He cut out the honey and also cut out the worms and threw them away.

No, they were not moths. He knew moths when he saw them. They were worms. Some sash were nearly full of them, and he just cut them out and threw them away. The box hives made the most honey and had the least worms. I will not try to pen what I thought but I wish some bee inspector would get hold of him and let him tell the inspector how to cure foulbrood by cutting out the worms. I switched off of him right now and hunted up some northern delegate to whom I could talk about Florida. I almost believe there were about as many northerners present at the Valdosta meeting who were as full of questions about Florida as questions about beekeeping. I got my chance to boost a wonderful state. My last words to them were to come on down. No droughts, bee pastures are free and best of all, homesteads are not taxed. When the Townsend old age pension bill passes, Florida will be Heaven.

Spring Weather in N.-E. Saskatchewan

Weather conditions here at Rose Valley are usually our own problem. To begin with, from the middle of October until the middle of April, the bees cannot fly. In early December, there is a stretch of bitter weather when there is no snow for protection and the thermometer drops to 45 below zero so the bees must be put in the cellar for wintering.

The thaw comes in late March; usually by mid-April bees can fly and by the first of May poplars are in bloom, followed in rapid succession by willow, sweet coltsfoot, Saskatoon wild currant, gooseberry and dandelion.

About the 15th to the 25th of May there is invariably a cold snap frequently with snow, always with cold rain and bitter winds. This is often fatal to newly arrived packages and makes the importation of early bees unprofitable.

If one waits until after May 24th, he misses the fruit bloom, but conditions are better. Italians do not winter well here. There is seldom a time, except for a few days when chilling frosts occur in the May cold snap, when there is any cessation of honey bearing plants from the poplar bloom until sweet clover begins about July 15th. This continues for a month or more, there always being a second growth when hay is cut which prolongs the flow through August, followed by thistle and wild mints until the killing frosts arrive in September.

M. J. Harwood,
Saskatchewan.

Ignorance Cause of Underselling

Many beekeepers who undersell their product locally do so because they really do not know what the retail price should be. They accept whatever is offered by the buyer. In other cases they fail to distinguish between retail and wholesale prices.

If leading producers would organize in each county and agree on a schedule of fair prices, it would help. Of course there will be chiselers seeking to take advantage of their neighbors by underselling, but we have found the plan to work out very well here. It is not probable that governmental or code price fixing would be practicable for the sale of honey.

E. S. Miller,
Indiana.

New Science in Colors

The new science is teaching that some of our old ideas about things are wrong, or at least only half right.

For instance, the flying men have learned that white is not the best color for airplanes if you want to see them at a distance. Orange red has higher visibility at long distances. This is a rather strange anomaly, as dark red is one of the hardest colors to see in a foggy atmosphere.

This scientific fact shows at once that white flour is not the best thing to dust on a bee as a means of following him in flight, in lining a bee to a tree, in tracing robbers, etc. I would suggest cotton seed meal, well sifted to get the fibers out. Blow it on with a paper tube or shape it on with salt shaker.

In full sunlight, where the light cannot be controlled, a dead white surface, like a starched sheet is very hard on the eyes. Any other color is better for finding a queen when a frame of bees is shaken out to hunt out the queen. The white surface is good in a room where the light is controlled. Green color is the easiest on weak eyes.

Edmond Fontaine,
Maryland.

Safety Valve for Winter

The first thing Elmer Lewis, of Oakfield, N. Y., does when he puts a new hive into use is to bore a three-eighths inch hole in the front of it, about four inches above the bottom. He is in a section where there is much snow, ice and sleet. He says he never has known a colony to smother with this upper emergency entrance, whereas he has lost colonies frequently in the past without this opening. He paints his new hives with aluminum paint, and likes it.

S. F. Haxton,
Pennsylvania.

Lives of Famous Beekeepers

By Kent L. Pellett, Iowa.

HENRY ALLEY 1835-1908

HENRY ALLEY was the first American to raise queen bees and to sell them for a living. He was in the business for fifty years, and gave to the beekeepers a practical method of rearing queens. It largely passed out of use long ago and he is seldom thought of today.

Alley was a hard worker, and he had a strong, inventive, and practical mind. There was nothing wrong with his system. But G. M. Doolittle came along only a few years after Alley's book was published and offered a better book, with a different system of queen rearing. One by one the queen breeders adopted the ways of Doolittle and dropped Alley. Alley continued to produce and to sell queens by his method, intimating that Doolittle was a humbug. He struck out viciously in the papers at those who criticized him, but this only hastened his fall. He dropped out of sight and was almost forgotten before his death.

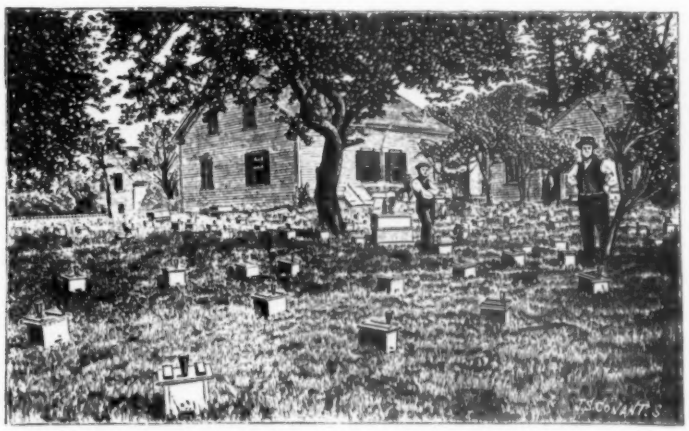
Father L. L. Langstroth wrote his book, "The Hive and the Honey Bee," giving his movable frame hive to the beekeeping world, at Greenfield, Mass. Nearby, at the picturesque little town of Wenham in the very shadow of Bunker Hill, Henry Alley, a pushing, energetic young man of twenty-three, a few years later established his Bay State Apiary. He used the movable frames to do his share in bringing about the improvements that tumbled on one another's heels in those exciting years.

Henry's father was an organ-maker and left him some good tools and a knack of doing fine work with his hands. Starting out with a single hive, he never built up a large apiary. He never learned the methods that make for large production. A beekeeper who knew him describes him as a putterer. Seventy hives was his limit. He was adapted rather to the royal and more delicate task of raising queens, than to the producing of honey.

Almost at the time he started the Bay State Apiary there came the golden stream of Italian bees brought from across the ocean by Mahan and others who tried their luck at importing. Writers praised them to the skies in the journals, and people wanted queens from the new bees. Many beekeepers tried to raise the yellow queens. But most men, more clumsy of fingers and understanding, did not succeed so well as Alley in this dainty work. Many quit for want of customers. Ten years later Alley said that he was the only one who had started to raise Italian queens and who still continued.

The orders came to him. As the demand grew he could not always keep up with it. At times he was 500 orders behind. He had to find some way to produce queens more rapidly and more dependably than by merely depriving colonies of their queens and leaving them to provide new ones. It was under this pressure of business that Alley devised his system. He cut combs containing eggs in narrow strips. Every other egg was removed, giving the bees plenty of room to build the queen cells. The bees, seeing the cells arranged mouth downward and everything handy, proceeded to build a queen cell around each egg. Alley had left them queenless, yet very strong in numbers, and they never failed to rear a large number of queens.

After a few years he was filling



Alley's queen rearing apiary from an old picture. Until 1914 at least the honey house and equipment remained just about as you see them here. We visited with Mr. Alley's relatives at that time.

one hundred orders a week for queens. In one season he sold two thousand queens.

Alley carefully perused the bee books and magazines. He found only the old methods which had been long in use. So he wrote his book, "The Bee-Keeper's Handy-Book," giving in detail his method of raising queens and general advice on the practical management of the apiary.

"The present and future interests of apiculture demand a more thorough and practical method of rearing queens," he said in his preface, "and I shall endeavor in this work to give my readers such information as shall tend to give a new impetus to this branch of beekeeping . . . to offer to the beekeeping public, for their consideration and adoption, a thorough, practical and scientific method of queen-rearing, which is the result of many long years of practical experience, and much hard study."

The book was published in 1883 and sold for a dollar.

Alley was right. His book did offer a new impetus to queen rearing. It was widely bought by the breeders and went through several editions, over a course of twenty years. The demand for his queens rose. The Alley system was adopted everywhere. But only six years after the appearance of the "Handy Book," Doolittle's "Scientific Queen Rearing" was in the hands of a publisher.

Alley was writing for the bee papers. In 1883 one of his students, S. M. Locke, started a new journal, The American Apiculturist. "A sprightly bee journal, one of the best ever started in this country," said one of his competitors. Alley found his forum and did most of his writing in its columns. In company with Dr. C. C. Miller, G. M. Doolittle, and other prominent beekeepers, he made it a popular paper. He used the "Api," as he called it, for his opinions, until he himself caused its death by his clumsy editorial efforts.

The Apiculturist gained subscribers. But Locke died and Alley took over its publication in 1886. It was not long before readers noted a change. He was in the supply business and filled his columns with talk of his wares.

The Apiculturist apparently was not paying and Alley frequently complained. Each time a new editor started a bee magazine somewhere, Alley remarked that another would have to dig down in his pocket. And he was probably right, since almost every month a new journal was started.

Alley also attacked the editors of better established papers. A. I. Root of Gleanings in Bee Culture, W. Z. Hutchinson of the Beekeepers' Review, T. W. Cowan of the British Bee Journal, all felt his lash. And he liked especially to heap ridicule on Tom Newman, then editor of the American Bee Journal, who never had been in the bee yard until he published the Journal. Alley was in a different position. He had been in the bee yard for nearly thirty years, and knew what he talked about!

He hesitated not at all to point out the errors of his contributors. And Doolittle, who now had announced his own system of rearing queens in man-made cell cups, and who gained converts more rapidly than Alley, felt especially the brunt of his attack. Alley said there was nothing natural about the Doolittle method, from the artificial cells to the larvae that had to be moved from worker comb. Not a queen breeder in the world could succeed by such a method. He even doubted that Doolittle used the method himself.

When the contributors fell away, Alley lost no sleep. He let it be known in the Apiculturist that he welcomed contributors, but he did not need them. He had had thirty years' experience with the bees, and he could write all the articles needed. He put in ten hours each day in the bee yard, filled the orders for his queens, and yet found time to answer many letters. He did all his own work without help. But no matter. He would find time also to write all the articles for the paper.

Alley was importing and raising new breeds of queens in his apiary. He tried Syrians, Cyprians and Carniolans, and Carniolan and Italian hybrids, playing up his efforts in the magazine. But in 1886 he abandoned them. "Pure bred Italians of the best working strains will be a specialty at the old Bay State Apiary in the future," he said. "We want no more Syrians, Cyprians, Carniolans nor hybrids of any kind."

But later Alley forgot this decision. In the nineties there was a craze for importing still newer races of bees, and Alley bought black queens, the Punics, from the Sahara desert. He tried the Punics in his apiary, and claimed that they would be the most wonderful bees ever raised by man. Great honey producers, so tame they would not sting. He said the queens were selling for eighty dollars and might go higher.

Articles on the Punics appeared in Gleanings in Bee Culture and the British Bee Journal. Beekeepers said they were black both in color and temper, that they gummed up the whole hive with propolis. Alley flew at editors Root and Cowan for allowing criticism of the Punics in their pages.

The venerable Langstroth wrote Alley a fatherly letter. He advised him to have nothing to do with the Punics. "You have long been known as the largest queen raiser in the country, and I should feel sorry to have your reputation injured," he said.

The customers decided the issue. They did not care for the Punics. A year or two later Alley was offering in the Apiculturist only the Italian and Carniolan queens.

In 1895 the Apiculturist was discontinued. Alley had found little favor as an editor for all his thirty years of experience. He was seldom heard from in the magazines after that, although he still did a good business in queen rearing.

In 1904 Editor Root of Gleanings in Bee Culture had heard that Alley was "declining in health, sick and not long for this world." He wrote him a sympathetic letter, expressing the hope that he might hold out for some years longer.

Alley retorted from Wenham that he was far from dead. "I hope you can come down and look me over," he wrote. Root paid him a visit shortly afterward and found him still busy in the queen yard. He was a medium tall stocky man with a huge white beard that covered his face, and his light blue eyes twinkled as he joked with the editor of Gleanings about his years of decline. He moved among his bees without covering for his head except for a large bandanna handkerchief that reached down well over the back of his neck, and that was held in place by a felt hat. He would rather quit beekeeping than use a veil. It was a sure way to cause blindness, he said.

That same year Alley wrote his last article for the American Bee Journal.

Alley never told much of his first wife or his three children, and his family life has remained a secret. J. H. Martin mentioned two wee granddaughters who followed his work in the bee yard at a distance, and to whom he gave honey on a platter. But that is the only glimpse that has been accorded the public.

Of his second marriage more is known. Late in life he became acquainted with Margaret Ball of Vernon City, N. Y., who was also a beekeeper, through selling her an exceptionally productive queen bee. She wrote him glowing accounts of the work of this queen and her bees. Henry tried to buy back the queen, even offering to send several young queens to replace her, but the woman refused to sell. At length Alley went to see her—to make a last atempt to get the queen, it has been told—and married her. The new Mrs. Alley was an enthusiastic beekeeper and went with Henry to Massachusetts bee meetings.

The last few years of his life he went into ham curing during the winter months. He had invented a process for curing hams and was well known for it. The beekeepers forgot him, but he was still prominent at Wenham, where he had been a police officer, a member of the local republican committee, and active in most of the local lodges.

In March of 1908 the editor of the American Beekeeper published his "Old Boys" issue. He asked a dozen of his favorites among the older beekeepers to tell of the old-time beekeeping and "revive the old-time spirit." He wrote to Dr. C. C. Miller, to Doolittle, to O. O. Poppleton among others—and to Alley. Most of them responded with characteristic observations. But there was nothing from Alley. He had died on February 12, and the editor wrote, "Instead of the pleasure of presenting an article from this venerable apiarist, we have, instead, to chronicle his demise."

Here it is well to add that the queen rearing system of Henry Alley has not passed out entirely, and that at least one breeder is now using it. While this story was in preparation Jay Smith published an article on his work with the Alley method in the Canadian Bee Journal.

Mr. Smith says: "After many years of experimenting I again tried the system originated by Henry Alley. . . . I doubt very much if his system of starting queen cells will ever be materially improved upon when we consider the quality of queens produced and the practical manner of producing them. . . . We used grafting for over thirty years but never got entire satisfactory results through the entire season. We never expect to use it again."

Brood Combs—How Old?

How long should a brood comb be used before being replaced? Some say it should be changed in two or three years. Well, not long ago I came across one that has been in almost constant use since 1885. I have been keeping tab on this comb for a good many years. The comb is recognized by the arrangement of the cells and by the frame, which is one of a number made about fifty years ago, before foundation and Hoffman frames came into general use in this locality. Apparently, it is as good as when first built by the bees.

We have many combs that have been in service more than twenty-five years, alternating between super and brood chamber. No microscopic measurements have been made, but from casual observation, no difference is seen between the size of the cells and those in newly built combs. Neither do we note any diminution in the size of the bees reared in these combs. When hives are kept well painted and colonies are wintered in a dry cellar, combs, frames and other hive parts will last indefinitely. And we don't need to worry about the size and other characteristics of the bees because of old combs.

E. S. Miller,
Indiana.

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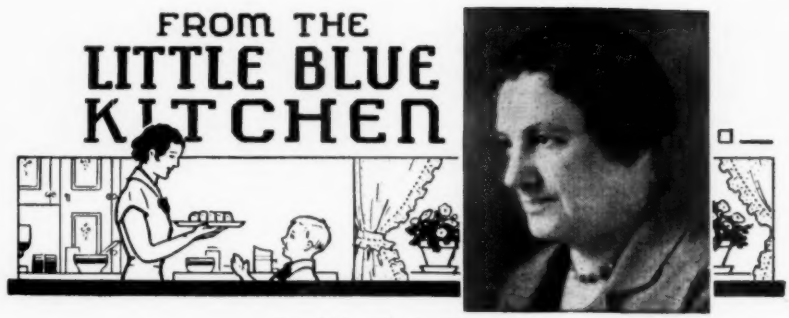

By Lida Keck-Wiggins

"WHAT is so rare as a day in June?" wrote a poet of bygone days. And what is? Nothing quite so lovely as the month of roses, brides, girl graduates! There are also many good eats native to June, and as this is a Kitchen Department let us start talking about ways and means of using our honey pots in June cookery.

If Blue Kitchen readers are as fond as its editor of oven cooked meals, especially on hot days when it is such a relief to cook most of the main meal over one burner they will be glad, perhaps, of the suggestions that follow.

Many times Honey Lady has tried with success an oven cooked meal, using the various dishes for which she is now passing on the recipes. While there are many more delicious concoctions to tempt the palate, which she might mention, naturally, those herewith employ honey as one of their ingredients. Hence for the beekeeper's kitchen they may prove of economic as well as gastronomic value.

If you like an appetizer before the hot dishes, nothing adds more to the tang of a fruit cocktail than to sweeten it with honey instead of cane sugar. Most any of the fruits of June can be combined in a little before-meal portion and so sweetened. Or even though a bit out of season nothing gives one a better appetite than half a grape fruit, prepared beforehand, chilled, with its heart full of honey and topped with a luscious strawberry!

And now let us open our oven door and slip in the main dishes of the meal that is to save fuel, lessen the heat, and prove to be oh so good besides!

We will select a nice thick slice of ham (if you chance to have your own home cured, all the better), and into a paste made of any of the prepared mustards, blended with extracted honey into a soft smooth consistency, dip both sides of the ham. Now let us place the meat in a baking pan and cover it with sweet milk and allow to bake until tender. This will be our meat dish. With this, candied sweet potatoes "go" very nicely. These to be **very** nice should be parboiled first, peeled, slit, and then spread with butter, salt and a thin covering of honey. If you have some granulated honey this is a good way to use it up. Place your sweets in another baking dish and slip into the oven beside your ham. If your men folk are as fond of apples as the one in Honey Lady's house you'll add value to the meal by preparing an "apple dish" the honey way. That is, cut apples into eights, coring but not peeling. Line sides of a pie pan or other shallow oven container with these and cover the bottom also, letting them stand up instead of placing them on their cut sides. Pour small amount of cold water over them. Then dot the whole with bits of butter, sprinkle with nutmeg or cinnamon, and cover with honey to taste. This will give you a vegetable dish and a relish, and now, how about some baking powder biscuits? Doubtless every cook has her own particular "pet" recipe for these but here is a really-truly fine one in which we'll stir a bit of our beloved amber nectar of the clover blooms. Here is the recipe which Honey Lady knows from "experience" is A-1.

2 cups flour
1 cup milk
2 tablespoonfuls butter
2 tablespoonfuls lard
1 tablespoonful honey
2½ teaspoonfuls baking powder
1 teaspoonful salt

Of course you will sift all the dry ingredients together first until well blended; then add the shortening, having mixed the butter and lard thoroughly first. The honey and milk should be well blent and then slowly added to the dough. Work all together with floured hands, place on board and roll. Then use the biscuit cutter and slip into oven. These biscuits may be served without any "spread" other than butter, but if you want them to be specially "honified," spread them with a mildly flavored honey.

With this dinner a nice juicy cherry pie or one made of the month's other delicious red fruit, the strawberry, would be just about a perfect windup for your meal, and if you've never tried so sweetening strawberries or cherries you'll surely have a delightful surprise if you use

honey instead of the usual amount of sugar when making this dessert for your oven cooked June meal.

Any one of the honey-way cakes that have been given from time to time in Blue Kitchen would also be nice for dessert, and in that case could be served with plain strawberries or other fresh fruit, honey sweetened. If you decide on this combination, don't fail to crush the berries, work in the honey and then chill before serving.

If you do not wish to serve sweet potatoes, escalloped tomatoes with a small amount of honey used as sweetening, would also go well with the ham. Honey Lady lately discovered, incidentally, that the use of some one of the small-shaped macaronis, dropped into stewing tomatoes or placed in layers in the baking dish, if the vegetable is to be escalloped, make a delightful change from the time-honored bread thickening, or the creaming with milk and flour. Honey gives a new flavor to the dish however prepared.

If your family prefers a cold dessert instead of an oven baked one you will find several recipes for honey-way ice creams or ices in former numbers of the American Bee Journal in the Blue Kitchen corner. Honey Lady has always had fine success in making ice cream with honey sweetening. The peculiar honey flavor is not noticeable but there is something "different" about the ice or ice cream that one's family or guests are sure to notice and like.

Don't forget, dear home canners, that the fruit you put up with honey will keep better than with sugar, and look much brighter and prettier also!

A good bee line to contentment and peace at Christmas time is to have one's gifts planned, if not actually prepared months before. Therefore when making your preserves these June days, get fancy containers, fill with strawberry preserves, canned cherries, or any other of the month's offerings, and then stow away these dainty and desirable gifts against the Christmastide. Honey Lady knows how utterly delightful it is for a girl away from home, working in a city, for example, to receive a box or even one jar, of homemade preserves! It's a sure bee line to genuine happiness!

Honey

By busy wings and little feet,
In garnered amber, passing sweet,
A summer day is prison'd,
Each perfume spilled, each drop distilled
Is Paradise with nectar filled,
A very Kiss envision'd.

By John Mavie,
England.

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2-lbs. Bees With Young Queen	1.95
3-lbs. Bees With Young Queen	2.55

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Emil W. Gutekunst, Colden, N. Y.

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Dept. B Warrenton, Mo.

THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

PREVENTION OF SWARMING

I use two hive bodies for a brood chamber also for wintering—along about swarming time I want to place a queen excluder between them; also I want to move most of the brood frames from the lower brood chamber to a super above the queen excluder to prevent swarming.

1. What will happen to the queen in case I get her penned up above the queen excluder?
2. If she dies will the colony produce another queen below the queen excluder?
3. What can I do about the drones that get above the queen excluder (they plug it up by getting stuck in it in their efforts to escape)?
4. How does a drone trap operate?
5. If I place a brood chamber up side down on top of a brood chamber filled with empty comb, will the bees move the honey down in the lower brood chamber?

WASHINGTON.

Answer.—1. If you move both the queen and the brood beyond the queen excluder, you will have the body of your colony on that side of the queen excluder. Nothing will happen to the queen except that you will not have the result that you would expect. It is not difficult to avoid moving the queen, if you are careful.

2. Yes, if there is much brood left in the part of the hive that becomes queenless, they will most probably rear a queen there.

3. There should be but few drones unless you leave your colony with lots of drone comb when spring comes. We always remove the drone comb and replace it with worker comb, before the spring laying begins. Drones are a nuisance, unless you want them for mates for queens and there is need of only the drones of one high grade colony in an apiary.

4. Drone traps are nuisances, as they interfere with the flight of the bees.

5. If the honey in a brood chamber that is moved is sealed, the bees will not move the honey. I see no use in turning a brood chamber upside down.

HONEY VS. SYRUPS

In my locality, the honeyflow comes late and is preceded by a dearth. This makes it necessary to see that brood rearing don't slump after the early flow in the spring. Under this condition, suppose I had two colonies. No. 1 had fifty pounds of honey and No. 2 was on drawn combs but was fed fifty pounds during this dearth. Would there be any great difference in the population of these colonies at the time of the flow? If feeding is highly advantageous, then would it not be a good plan to extract the honey from the early flow, put the bees on the empty combs, and feed them? I do not consider the early flow a marketable product because of the honeydew.

CALIFORNIA.

Answer.—I believe that the colony that was fed plentifully during the dearth would be likely to rear more brood and be therefore stronger than one that was rich in stores and not fed. A good way would be to feed the rich colony a little during the season so as to make them spend a part at least of the stores to breed. There is no doubt that a little liquid food would go a great way towards getting them to breed.

HONEY AS A FOOD

1. Will honey make fat?
2. Is wax in honey good for a person to eat?
3. Will eating honey cause high blood pressure?

KANSAS.

Answer.—1. I do not believe that honey will make a man too fat, but it will certainly keep him in good condition. I eat a great deal of honey and I am in good health.

2. Some people claim that honey in the comb is healthier to eat because the stomach cannot digest the wax and it acts exactly like bran in all-wheat flour. I don't know, but I prefer the extracted honey. Beeswax is not digestible and it will pass through without changing.

3. As to high blood pressure, I believe it is due mainly to the consumption of too much rich meat. I would not advise the use of any meats for any one who has high blood pressure.

PLACING SUPERS OF FOUNDATION

If you had around 200 good strong colonies of bees in ten-frame hives, two hive bodies high, and both boxes very well filled with brood and honey, honey coming in fast enough to stimulate brood rearing, main honeyflow not yet on and you wished to put on a full depth super of foundation where would you put it? On top or between the two boxes?

My main flow comes from mesquite and cat claw, and when it is on the bees bring in around fifteen pounds per day.

ARIZONA.

Answer.—I would put the full depth super on top of the other two bodies, although it does not matter very much whether it is put at the top or not.

If you are likely to want a greater amount of breeding, you may put the super between the two other stories. If put at the top, it will not encourage breeding quite so much.

It is preferable to have supers of half depth but full depth supers are all right.

MOVING SHORT DISTANCE

I have eight hives, four of them facing north and four of them south. I want to place them all so they will face the west. There is only a few feet to move each hive that is why I am afraid I am going to have trouble.

There has been a few warm days lately and the bees have been out flying. Some of the fruit trees are in bloom and also the dandelions.

KANSAS.

Answer.—To move bees so that they will stay moved, that is to say that they will not go back to the old spot, you must get them disturbed so that they will behave as if they had swarmed. Do not move them in winter weather, but wait till they have a warm day coming. Close up the hives early in the morning, then smoke them and drum them to make them feel that something awful is going to happen. Move them to the right spot, then open the hives so they may fly at once. Fix the entrance to make them notice at once that it has been changed. Turn them loose.

The bees will at once notice the change and very few of them if any will ever return to the old spot.

MARKINGS OF BEES

This spring we got two colonies of Italian bees. The workers have yellow bands but the young drones which have hatched out are a light grey with almost white bands, while the queen is all black without any yellow on at all. Are they the real Italians or are they mixed?

MINN.

Answer.—The pure Italian worker bees have three yellow bands on the abdomen, which may be of a light yellow color or "leather colored" as people call them. If your worker bees show the yellow bands, they are pure. The color of the queens and of the drones vary very much, although some breeders who rear bees for color often have colonies with yellow queen and yellow drones. But the darker color of queen and drones is not a sign of impurity, if the bees are well marked.

LECTURING ON BEES

I have been asked to "talk on bees" at a nearby church some evening in the fall. Though I have kept bees for ten years, I am "scared stiff" because not a man in the audience knows a thing about bees and I am afraid of being too technical.

I plan to take along, specimens of queen, drone and worker, also a glass observatory hive with bees, smoker and tools, an extra hive and possibly some queen cell cups, etc.

Could you suggest any manipulating that might be done for the "edification of the audience"? I've seen pictures of stunts that have been worked, like making a beard of bees; and I've heard of throwing the bees out in a ball only to have them return to the hive without bothering anyone. But, I don't know how these stunts are done, nor do I know of any that I could do with safety. (I don't mind getting a sting or two myself, but I don't want anyone in the audience to get stung, or I might lose my audience.)

I've only opened hives a few times at night, but never liked the job as the bees seem to fly up into the light and sting very readily. That makes me wonder whether any manipulating can be done in a room at night.

How long before the affair would I need to have the bees in the room to have them settle down to the hive? NEW YORK.

Answer.—The plan that you make of taking an observing hive, with bees and queen, is the best thing you can do in an occasion of this kind. It would not be advisable to turn the bees loose.

Put a comb of brood, bees and queen in this hive the previous evening. And by the way, do not handle bees after dark, as they are apt to fly to your face. The best time to handle bees is in the day time when the old bees are in the field, for they are the ones who become cross at night.

As to what you may say, just get the matter opened and you will have more questions than you can answer, by the people who will witness your exhibit.

If you wish to exhibit queen cells in the observatory hive, then you should take a queen in a cage. Either way is good. We used to keep an observatory hive on hand all summer with bees in it. It is a constant source of amusement. When you take it to the show, be sure and have a screen over the top of the comb, so that the bees may get ventilation in plenty.

GARDEN FLOWERS FOR BEES

Please advise on setting bees near greenhouse, for spring brood rearing.

They get lots of pollen from cinerarias and Easter lilies, between now and apple blossom time. Would like to know if bees get any honey from greenhouse flowers. KANSAS.

Answer.—There is only one trouble about a greenhouse for bees it is that they readily get trapped by the windows in it. I always noticed that the bees will get caught in the windows, behind the glass and you will find that more is lost than gained in these losses. However, if you can manage things so the bees will not get caught, there is undoubtedly some advantage to be gained by their working on greenhouse flowers early in the season.

ANTS IN HIVES

In several instances my brood chambers and supers have been infested by ants. In only one case did they have eggs, and only then in a declining and queenless hive. I do not know but I imagine they are detrimental and impede progress to some extent. Some of these hives are live, fine hives. A good laying queen and everything functioning properly—but the ants are there—running about in an aimless sort of way.

1. Is there a solution, a powder or any other means of keeping them from the hives without injury to the bees?

2. Is there any mixture one might pour into the ant's underground tunnels which would destroy them and still not harm the vegetation?

Ants are also infesting our kitchen in rather a major way. We endeavor to leave no food about for encouragement but have rather been fighting them tirelessly.

3. What would you suggest in this case to destroy them or discourage them (if such is possible) and drive them away?

4. If it is impossible to find the old queen (which is dark and not laying) and a young golden queen is introduced, will the bees accept the new one and kill the old, or will one of the queens lead a swarm? If so, which one, the old or the new? MISSOURI.

Answer.—1. The best way to solve the ant question is perhaps a difficult one for some people. It is to find the ants' nest and destroy it by pouring some gasoline into it and setting fire to this immediately, before the gas spreads about. Or you may pour coal oil into it.

2. Bisulphide of carbon, poured into the ants' nest will kill them if the opening is carefully closed with a board or with some clay. Boiling water may also be used.

3. Ants in the kitchen may be killed by placing within their reach a glass partly full of sweetened water. They go down to the water and usually drown in it. Some people place a piece of paper with a hole in it over the top of the glass. The ants go in but are unable to crawl out. If you find their method of entry, place some coal oil across their track.

4. It is best to find the old queen. It is never impossible to find her, if you shake the bees in front of a hive. The old queen, even if dark, is easily seen.

Not Unusual in Spring

My neighbor called me to his mill house and asked "What do they want?"

It was early April a few years ago and the neighbor had been grinding corn. There was perhaps a ton of coarse corn meal piled around the grinder and my bees, thousands of them, were flying around burying themselves in the meal, filling their pollen sacks with this and carrying it to their hives.

This neighbor uses honey and since corn was not high priced, the matter of damage was quickly arranged and the bees were allowed to continue their work. This neighbor also kept two barrels of ground feed some distance from the mill house. They had loose fitting covers and the bees were finding their way in and the barrels were swarming with them.

I fixed up a box of the same feed and placed it near the hives at home and soon there was a cloud of bees over this box but the number of bees at the neighbors did not lessen. In fact they seemed to increase for soon the housewife told me they were swarming around her chicken feeders.

I felt it was fortunate to me that my neighbors were good natured. It was a great relief when there was pollen available from natural sources.

Corn is now high priced and going higher, and the question of damage this spring will be different. I wonder if my neighbor knows that a colony will carry from the field to the hive as much as twenty pounds of nectar in a day and will he insist that they can also carry that much corn meal?

As the bees entered the hive on the return trip from the mill, they were completely white with meal. When they returned, all of this had been removed. This meal was made of whole corn, nothing removed.

W. H. Eastman,
Kansas.

Candy for Feeding

By J. C. Elliott,
Kansas.

Bees seldom need to be fed here, so I am never fixed to feed a large number. But one spring, owing to cold backward weather, a number of colonies ran short of stores.

I tried both syrup and candy. The syrup must be fed in some kind of feeder and seems to have a stimulating effect on the bees. If it is very early in the season that may not be so good. One may lose some strong colonies if delayed in getting back to the yards to feed.

With candy, no equipment is needed. The feed can be placed where it will do the most good and once a week is often enough to visit the bees. The main disadvantage is that the candy is harder to make than the syrup.

I use a large pan about twenty inches square and about ten inches deep. I can make fifty pounds of sugar at one time. It takes about a fourth as much water as sugar and the water should be put on the sugar and get the sugar all wet before placing on the stove. This is to guard against the possibility of scorching. If too much water is put in the candy it will take longer to cook but if too little water is put in, all the sugar may not dissolve. When the hot candy will form a soft ball when dropped into cold water it is done. Cool, then beat with a paddle until creamy. I then pour it into hive covers that have been lined with at least two thicknesses of paper. About three-eighths of an inch is thick enough for the sheets of candy. When the candy is cool it should be rather soft but not runny. The sheets may be broken into pieces the right size for the particular colony needing feed. There is no robbing and no excitement, this way.

By G. H. Cale

IT is not dignified to swear in print or I would do a good job of it. This has been the worst spring in my acquaintance with bees in this country. We have always boasted that, with a large hive and ample brood rearing space and a colony in constant balance in working force and in storage necessities at all times, there would seldom come a year when swarming would be a problem.

— o —

This year is that year which "seldom comes." Bees have been shut in constantly right during the peak of spring brood rearing. Regardless of the source of queens, the size of the colonies, amount of room at hand or any other internal factor, swarming has suddenly become a pressing problem in the large hive and at least 30 to 40 per cent of the colonies have built cells within the last ten days or two weeks.

Add to this the fact that during the month of May, there have been just two days without rain and a rainfall three to four inches above normal for the period and you will easily visualize the situation which we are up against. Almost impossible to visit some of the yards and so a situation like this soon gets out of hand with little to control it. The only thing that will stop it, will be good flying weather and the beginning of a honeyflow.

— o —

About the only successful way I have found to control swarming in the large hive is to remove the queen, cut out all queen cells, go over the combs again in nine or ten days and cut out any more cells that may have built in the interval and introduce a young laying queen. That usually terminates the swarming for the season.

— o —

In addition to the impassable roads, one yard has been surrounded by water on all sides. This just suits the definition of an island. To get to this "island" requires a boat, hip boots or a hayrack and horses, depending on the height of the water; in any event some means of conveyance other than an automobile. An automobile is perfectly helpless.

— o —

Just as we get ready to visit the yard, it rains again, so **we** are helpless. This year it appears that we have too many bees altogether and it makes one wonder if honey production is suited to large scale operations which embrace thousands of colonies, expensive equipment and heavy investment. It may be better suited to a balanced agricultural program in which the bees are one of a number of cash paying ventures.

— o —

To report about those queens introduced last November in the broodless period in which so many readers were interested at the time. Out of about sixty or seventy queens introduced, only two were found missing this spring. The rest of them were right on the job laying beautifully. It seems to me as though they lay more abundantly than those introduced earlier during the brood rearing period in the fall. We will certainly try this more extensively this year.

— o —

After all, no colony of bees and no hive is any better than the queen. It's surprising how a good queen with a few bees will jump ahead and make a large crop while a large colony of bees with a poor queen will drop behind and make little or nothing. Doolittle was right, "The queen is the soul of the colony."

— o —

Now, lest all the queen breeders get into a hat throwing contest over this statement, let me say that there is a big difference in queens (and of course that involves the breeders, doesn't it?).

— o —

Some queens have characteristics that seem to be definitely fixed in their behavior. They lay rapidly, building a colony quickly to a high point in population. Others lay slowly, steadily and maintain a constant population through the year. That is one characteristic of the Italian stock which we have received from Sechrist in Tahiti. The queen is a steady layer. I imagine if we could measure her brood, it would reach a certain high level and maintain that level for a long time. I also expect that some of our queens which have been bred for prolificness in this country, rapidly reach a high level and just as rapidly fall away from it. Which is the most desirable character?

Shall We Ship By Express or Truck

By P. M. Williams,
Alabama.

The article by Dr. Whitcomb in February on the crating of package bees for shipment is interesting, but as I see it unless all shippers adopt the standard crate, we have not made any progress. The cage dimensions are of minor importance but if every crating strip were thirty-four inches long and the two outside cages were placed approximately two inches from the end of the strips and the third cage in the center, an express messenger could stack the crates with no danger of cutting off ventilation from any package. A slight variation in length or width of crate would never cover the entire space between the cages below and a free movement of air will be maintained through the aisles between the packages.

If all bees were shipped in these standard crates, there is no reason why they should not go through better and thus eliminate much disaster to all concerned. Business such as the express companies put over last season leaves a bad taste in the shipper's mouth and shippers who have always recommended express are now saying **let them go by truck.** Under the code, our responsibility is over when the bees are delivered to the truck while by express we must guarantee safe delivery. If they are smothered in transit and the express company fails to honor our claim, we are at a loss.

Express shipment is more convenient for the shipper than truck but unless the express company demands standard crating or uses some method to insure safe delivery and will then guarantee to pay for the losses in transit, we are going to use trucks. I am recommending truck shipment this season to my customers for the first time and I think most of the heavy shipments are going by truck.

Express rules say that certain things shall be crated in suitable crates. Why can they not say in the case of bees, with a crating strip 34 inches extending two inches beyond the end package, and having three packages to the crate?

We want safe delivery and most shippers are anxious to do everything they can to cooperate but the few who will not should be compelled to do so by an express company rule and thereby bring about better conditions for everyone.

When the express companies demand a standard crate, if they are to move our bees, if we do our part and the transit company pays damages in loss, then the shipper will **recommend express shipment.**

New Jersey Beekeepers' Tour

The New Jersey State Beekeepers' Association is planning a beekeepers' tour starting at 10:30 a. m. June 22 from the junction of Route S-40 and Browns' Mill Road, twelve miles west of Lakehurst. From this point the delegation will go to blueberry and cranberry plannings, State Apiary, New Lisbon, 12:00 noon; State Queen Mating Yard on Plains, 3:15 p. m. Write secretary for further details.

E. G. Carr, Secretary,
Pennington, New Jersey.

Vigo County Association

William A. Pogue, Indiana, reports a meeting of the Vigo County Association at Terre Haute on May 15th. The Ladies' Auxiliary served Honey Pumpkin Pie, Honey Chocolate Cake and Honey Cookies. Next meeting will be the Clay-Vigo joint beekeepers' field meet at Deming Park, Terre Haute, on June 22nd.

Montgomery County Association July 27

Montgomery County, Ohio, Beekeepers' Association will have a July, basket-lunch field meeting on the farm of Walter Rhoads, two miles southwest of Brookville on Tom's Run Road at 10:00 a. m. July 27.

Those on the program include Mr. Ward Ruse, President; Dr. W. E. Dunham, Columbus, Ohio, "Reducing the Cost of Honey Production By the Use of Two Hives." N. C. Yoest, Sales Manager, Millersport, "Selling Your Crop to the Best Advantage." Chas. A. Reese, State Apiculturist, Columbus, "Inspection Work for the State of Ohio." O. K. Cunningham, Farm Agent for Montgomery County, "Planting Farm Crops Which Produce Honey." M. J. Deyell, Editor of Gleanings in Bee Culture, "Modern Tendencies in Beekeeping." Guy W. Miller, Extension Economist, Columbus, "Cost of Producing Honey on a Commercial Scale." Each talk will be followed by a ten minute discussion. There will be a Round Table discussion on subjects of interest to the beekeepers present.

Penn G. Snyder, Secretary,
Ohio.

Clay County, Indiana, Organizes

William A. Pogue, of St. Mary-of-the-Woods, Indiana, and President of the Vigo County Beekeepers' Association, writes that the Clay County beekeepers of Indiana have formed an association. The meetings are to be held on the first Wednesday of each month in the County Agent's office in the County Court House, Brazil, Indiana. W. C. Carlisle has been elected president.

A Real Recovery From Tuberculosis

By Kennon Dunham, M.D.,
President, National Tuberculosis Assn.
New York.

It is natural and right that we should rejoice when we find the death rate from tuberculosis steadily declining each year. Just so, when a ship is lost at sea we are happy to read that practically all of the crew and passengers were saved and that care and attention is being lavished on the survivors. But can we be sure that the survivors from the shipwreck of tuberculosis are receiving more than a minimum of attention? A man may be grateful that tuberculosis has not killed him, but if its defeat has left him bereft of hope for the future it may indeed be an empty victory.

It is the duty of those who have assumed responsibility in the fight against tuberculosis to see that more than mere lifesaving is vouchsafed the men and women who have recovered from tuberculosis. They must be given more than healed lungs. Our task is not completed until the patient is able to take his own place in the world, and by "his own place" we mean the place which is peculiarly suitable for him as an individual. This is an ambitious goal, but to fall short of it is often to meet an abrupt and final defeat.

Adjustment and security are beginning to take their rightful places as necessary foundations on which to build health and happiness. It will probably take many generations even to approach this ideal for all our citizens. But a tangible and effective start can be made with a group whose need is great—those who are recovering from tuberculosis. For these men and women to be badly adjusted to work and to life is to woo disaster. The intricate relationship between emotional disturbances of worry, discontent, fear and physical disease are too wide and varied to be discussed here, but only an ostrich can deny their existence. In an effort to substitute hope for worry—peace of mind for discontent—security for fear—a very modern weapon is being used. This weapon is a careful analysis of all the assets an individual may possess—his brains—his training—his experience—his skills—his tastes—his aptitudes—his ambitions. There is no human being who does not possess some ability to do something. It is the function of this modern weapon, this social extra, to determine by study, by interviews, by aptitude tests, where feasible, just what this best ability is. Sometimes the ability needs only to be pointed out, more often it has to be trained. The social diagnosis, the training and finally the actual placement on a job is coming to be recognized as an integral part of the treatment of a tuberculosis case. The goal in each case is not only a cure, but a cure that will stick because the individual has found not only an arrest of his disease, but a satisfactory adjustment to life itself.

* * *

This article is published in the interest of the Early Diagnosis Campaign now being conducted throughout the United States by the affiliated tuberculosis associations. Under the slogan "Fight Tuberculosis with Modern Weapons" they are offering the public information on the modern methods of treating the disease.

Milk and Honey

Reference is made in the December number to Langstroth's comments on the dietary value of combining milk and honey. It must be Nature's way because the same plants that supply food for the cow yield nectar freely. Many a farming region, valueless for honey production, has been transformed, by the introduction of dairying, into a land flowing with honey as well as with milk. For with the cow came the clovers, alfalfa, vetches, sweet clover, rape, turnips, mustard and kale, irrigated pastures of Ladino and white clover.

Raw eggs, mixed with milk, sweetened with sugar, and flavored with orange juice have long been used for delicate stomachs. Substitute honey for the sugar and the combination becomes perfect. W. L. Arant,
Washington.

CAUCASIAN QUEENS for JUNE

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1 cup honey
½ cup butter
1 egg
½ tsp. salt
¼ tsp. soda
1 tsp. baking powder
½ cup finely chopped walnuts
2½ cups flour
4 tablespoons cocoa or 1 square bitter chocolate

Cream butter and honey, add egg and chocolate (if chocolate is being used). Sift dry ingredients thoroughly (including cocoa if it is being used) and add to first mixture, beating well. Then add nuts. Shape into loaf and wrap in waxed paper or put in cookie mold and place in the ice box to ripen, three days at least should be allowed. Then slice off and bake in a greased cookie sheet in a hot oven (400° F.) for 10 to 12 minutes. The cookies mellow and improve a great deal in flavor if after they are cooled they are kept in an air tight jar for two weeks.

Lemon Honey Cup Cakes

½ cup butter
½ cup honey
½ cup sugar
1 egg
grated rind of 1 lemon
2 cups flour
1½ tsp. baking powder
1½ tsp. cinnamon
¼ tsp. salt
½ cup milk

Cream butter and sugar till light, add honey and beat. Beat egg and add to first mixture, stirring well. Add grated lemon rind. Sift dry ingredients three times and add alternately with the milk to the first mixture. Pour into well greased gem, filling 2/3 full and bake in moderate oven (350° F.) for twenty minutes. Makes 12 to 16 cakes.

Honey Raisin Nut Bars

¼ cup butter
½ cup sugar
1 egg
½ cup honey
¼ tsp. salt
¼ tsp. soda
1½ tsp. baking powder
2 cups flour
½ cup milk
1 cup chopped raisins
1 cup chopped nuts

Cream butter and sugar till light and fluffy, add honey and beat until light. Add beaten egg and mix well. Sift dry ingredients three times and add alternately with milk to first mixture. Add chopped nuts and raisins, stir well. Spread very thin in shallow buttered pan. Bake in moderate oven (350° F.) for 10 to 12 minutes. Cut in bars 3 inches long and 1½ inches wide. Makes 4 dozen.

ADVERTISERS PAGE REVIEWED

Crop and Market Report

Compiled by M. G. Dadant.

For our June Crop and Market page, we asked reporters to answer the following questions:

1. Condition of bees?
2. Condition of honey plants?
3. Crop so far, if any?
4. Honey left? How is it selling?

Condition of Bees

Without any doubt, the condition of bees throughout the entire country was at least normal at the time the report came in for this month's crop and market page.

However, the main difficulty has been with the cool backward weather throughout the country. In several sections, the bees are really in poorer condition than they were a month ago when the weather had started to warm up and breeding had begun heavily.

In the northeastern sections as well as throughout the entire North, the rainy, cool weather has been a detriment to the bees although perhaps it has helped in holding down swarming as the early stimulative honey plants were above normal this year and apparently the bees would have gotten ahead of the beekeepers. It is, however, just such conditions which incite the bees to swarm and there has been considerable swarming even in the northern sections of the country. There has been a lot of swarming also in the South and particularly in California.

On the other hand, bees at the date this is being written (May 21) are so heavily filled with brood and with no honeyflow coming in, that undoubtedly there is going to be a lot of starvation before the beekeeper realizes it unless the weather turns quickly and a honeyflow materializes. Even should the weather turn, it is doubtful whether the early flows will be sufficient to carry the bees on.

Condition of Honey Plants

Throughout the entire South, the condition of honey plants is far better than it was a year ago. Rains have been satisfactory and in many cases excessive and the shortage of honeyflow has not been so much due to lack of honey plants as it has been to the backward weather. This is true except in the case of Florida, of course, where the orange flow was considerably reduced on account of the earlier freeze. Texas similarly has honey plants in good condition but the crop partially unsatisfactory on account of bad weather. In California, honey plant conditions are far above normal but here also the honeyflows so far have not been so satisfactory as might have been anticipated.

In the entire northern sections of the country, the honey plants of this year's growing are in really abundant condition and if we were optimistic in looking forward to 1936, we should say that there ought to be a bumper crop throughout all northern white clover and sweet clover sections.

However, looking at it from the 1935 standpoint, the honey crop is going to be particularly spotted in northern sections because of the drought last year. White clover of this year's growing will not yield to any extent in 1935 and a great many sections of the North have been hit by the white clover being killed out last year. Not only white clover but sweet clover as well was damaged and although there undoubtedly is plenty of sweet clover left this year for a honey crop as big as 1934, it is going to mean that the beekeeper is going to have to keep on the move in order to find locations for his bees in satisfactory sections.

The southeast sections appear to have their honey plants also in excellent condition and only waiting for favorable weather to get a desirable crop.

We mentioned above that white clover prospects were poor owing to the drought last year. However, in northern Iowa and northern Illinois, Wisconsin, Minnesota and into Indiana and Ohio where rains fell early enough last fall, even the white clover prospects are satisfactory.

Of course, the honey plant prospects also are severely damaged in the western drought areas where the old sweet clover has been badly burned out and the late rains although they are improving conditions greatly, cannot make up for the loss.

The intermountain sections are apparently in as good a condition as a year ago except for the drought conditions where honey plants have been completely killed. The snowfall in the mountains has been heavier than a year ago and in the northern sections as well as into Idaho, honey plant prospects are very satisfactory, indeed.

The same thing rules in the Canadian provinces, particularly in the Pacific Coast and plains provinces. In Ontario, slightly less rosy prospects are entertained although conditions are, we believe, far above 1935.

Crop So Far

Only southern sections can report a crop. In the Southeast, along the Atlantic seaboard, weather conditions have considerably interfered but crop perhaps is equal to last year. The honey from tupelo has been a disappointment as well as from the orange in Florida where the flow has not been up to normal. However, the later flows do have promise and we would consider that all in all the flow so far in all of these sections is far above 1934 even with all of the cloudy, rainy weather.

Texas honeyflow has been a disappointment owing to the weather also and the same rules in Arizona, as well as in southern California. The orange flow in many cases is anticipated not to be over one-fourth whereas the sage flow just coming on and already finished in some sections, will be perhaps three-fourths of normal. However, prospects for later honeyflows are, indeed, good in California as well as along the entire Atlantic seaboard.

Honey Left on Hand

The honey left on hand either in the hands of the producers or distributors will be negligible when the new crop arrives. In fact, probably 90 per cent of our reporters state that there is no honey left on hand whatever in their section and the possibility of supplying their consumers until the next flow comes cannot be met.

Reports in California indicate that a part of the producers are holding their orange honey for an advance in price whereas others are sacrificing to get the money that they need. It appears that buyers are offering reduced prices perhaps anticipating an opportunity of pushing down the market when the honey begins to be offered.

It is, however, a foregone fact that there is practically no honey left on hand and no surplus whatever to worry about as the new crop comes on.

On the other hand, honey is selling slowly, perhaps slower than last year at this time with a tendency towards a depression in the market which is perhaps caused by the activity of the buyers.

Summary

All in all, our idea is that bees are perhaps in better than average condition with a danger on account of the bad weather of considerable loss from starvation and very much swarming.

Condition of honey plants which will yield this year is spotted but the plants are getting in good condition and with a little moving around it looks like beekeepers should secure a crop. It does appear that the honey crop this year is going to be in excess of 1934 regardless of the effect of the drought last year. This applies not only for the United States but for Canada as well.

As to honey plants growing now for production in the fall or for next year, never have conditions been any better on account of the heavy rainfall.

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The POSTSCRIPT

GOSSIP ABOUT THE OFFICE IN THE MAKING OF THE MAGAZINE

So many letters have come regarding the behavior of buckwheat that much interesting information is coming to light. George H. Rea states that buckwheat produces the best seed crops when grown on acid soils which are not too rich in nitrpgen. Since sandy soils are usually acid it may account for the appearance that the plant does best on sand. Rea states also that buckwheat is very susceptible to temperature and moisture. Rea really ought to write an article telling in detail all the points his letter suggests.

— : —

Alfred P. Johnson, of Rankin, Illinois, tells of a crop of fifty pounds surplus honey per colony gathered in 1934 from buckwheat within a mile of the apiary. In this case the soil was black lowland with clay subsoil, in rather poor condition. Perhaps the acidity of the soil may account for the yield. It is seldom that a good crop of buckwheat honey is reported from Illinois. This honey was very dark, almost black.

— : —

In last month's postscript J. C. Elliott was quoted as regarding honey from wild cherry as of poor quality. To my taste wild cherry honey is rather pleasing although it may be mixed with other sources to such an extent as to modify its flavor. My samples came from localities with but relatively few trees. What is the general opinion of this honey?

— : —

With reference to the supersedure of queens in packages, J. B. Douglas, of Bonita, Arizona, makes an interesting suggestion. He says that it is a case of too much comb space which the queen cannot fill fast enough to satisfy her bees. He thinks there is less trouble where the bees are placed on foundation thus giving the queen a chance to fill the cells as the combs are drawn. Sounds reasonable.

— : —

Lynn Reynolds, of Tomah, Wisconsin, is not enthusiastic about vetch honey. With two seasons in the past six in which his bees worked freely on vetch he says that as far as he is able to single out vetch honey he would rather not have it. However, he reports that while the bees work the extra floral nectaries, the plant is also infested with aphids. Perhaps he gets both nectar and honeydew. May it not be honeydew which is objectionable. Most reports of vetch honey are that it has good flavor although of an amber color.

— : —

Little has been heard of honey from beans except in California. The late M. H. Mendleson reported large crops from lima beans in that state. A letter from an eastern correspondent tells of a locality where 4000 acres lima beans will be grown this year. If climatic conditions are right we ought to hear of some bean honey from the East.

— : —

A correspondent asks my opinion of Cyprian bees. Not having tried them my judgment is of little value. Their reputation as vicious stingers has led me to avoid the Cyprians. They are said to have many desirable qualities, to be hardy, long lived, and of an attractive yellow color. No queen breeder in America, so far as I know, now offers them. Most of those who have tried them have reported them to be too cross for comfort in handling.

A letter from W. J. Blume, of Sarona, Wisconsin, written in April told of the snow being nearly gone and the ice breaking up on the lake. He said that he was making maple syrup just then. When the letter came flowers were in bloom here, gardens were coming up and grass was green. It is interesting to note the northward movement of spring just at that season. Further south the fruit trees had already dropped their blossoms. That north country, however, is better for bees than regions farther south.

— : —

We are much pleased with the great interest manifested in the blue flowered sweet clover. The seedsman from whom we bought the seed in France, classifies it as **Melilotus caerulea** but most of our American authorities name it **Trigonella caerulea.**

— : —

L. R. Robson, of Saskatoon, Saskatchewan, writes that Prof. Patterson planted some blue flower sweet clover at the experiment grounds of the University a few years ago and that he speaks very well of it as a source of nectar in that region. It is interesting to learn that the plant is likely to succeed in that area where the common sweet clover has become so important.

— : —

It has been common practice for many beekeepers to sow sweet clover seed along roadsides, but a suggestion comes from Brother Frederick, of St. Mary's Mission, Techny, Illinois, to sow catnip in waste places. For years he has planted catnip in this manner and once established it is likely to remain for a long time. Probably there is no more attractive plant to the bees than catnip.

— : —

My attention has been called to numerous references to serradella as a honey plant in Europe. An inquiry addressed to L. W. Kephart, agronomist of the United States Department of Agriculture, brings the information that the plant has proved of little value as a forage crop where tried in this country. Since serradella does not seem adapted to our conditions it offers little promise for the American beekeeper.

— : —

A visit to the plant breeding plots of one of the great experiment stations arouses one's enthusiasm. So many new things are appearing in the way of new fruits and flowers that one wonders what will be next. Likewise it makes one anxious to see some really extensive breeding undertaken with the honeybee. With present day facilities much improvement should be possible.

— : —

H. R. Busch, of Hornby, Canterbury, New Zealand, writes that the new Alpha sweet clover has proved of great attraction to the bees when tried in that far country. He harvested 73 pounds of seed from a plot seeded with less than one pound and is now letting the seed to farmers to try for a forage crop. If they like it, it will add greatly to the local bee pasture. Mr. Busch would like very much to secure a sample of seed of the yellow flowered sweet clover which he has not yet been able to secure. If any of our readers can send him some it will be appreciated.

FRANK C. PELLETT.